THE
RAILWAY GAZETTE
A Journal of Management, Engineering and Operation
INCORPORATING
The Railway Engineer · TRANSPORT · The Railway News
The Railway Times · Herapath's Railway Journal · RAILWAY RECORD.
RAILWAYS ILLUSTRATED · ESTABLISHED 1835 · The Railway Official Gazette

PUBLISHED EVERY FRIDAY
AT
33, TOTHILL STREET, WESTMINSTER, LONDON, S.W.1

Telegraphic Address: "TRAZETTE PARL., LONDON"
Telephone No.: WHITEHALL 9233 (8 lines)

Annual subscription payable in advance and postage free
British Isles and Abroad.....£2 5s. 0d.
Single Copies .....One Shilling
Registered at the General Post Office, London as a Newspaper

VOL. 79 NO. 19 FRIDAY, NOVEMBER 5, 1943

CONTENTS

	PAGE
Editorial Notes	449
The Lords Debate on Transport	451
Argentine State Railways	452
Great Southern Railways (Eire) Reorganisation	453
Post-War Improvements in Goods Wagons	453
Letters to the Editor	454
Publications Received	455
The Scrap Heap	456
Overseas Railway Affairs	457
London & Birmingham Railway Hotel & Dormitories	458
Post-War Improvements in Goods Wagons	459
Secondary Air in Locomotive Fireboxes	459
An Efficient Junction Renewal	460
Personal	463
Transport Services and the War	465
Ministry of War Transport Accident Report	467
Stock Market and Table	472

DIESEL RAILWAY TRACTION SUPPLEMENT

The November issue of THE RAILWAY GAZETTE *Supplement, illustrating and describing developments in Diesel Railway Traction, is now ready, price* 1s.

NOTICE TO SUBSCRIBERS

Consequent on the paper rationing, new subscribers cannot be accepted until further notice. Any applications will be put on a waiting list and will be dealt with in rotation in replacement of subscribers who do not renew their subscriptions

GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as indicating that they are available for export

POSTING "THE RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and facilities for such dispatch.*

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas

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ANSWERS TO ENQUIRIES

By reason of staff shortage due to enlistment, we regret that it is no longer possible for us to answer enquiries involving research, or to supply dates when articles appeared in back numbers, either by telephone or by letter

ERRORS, PAPER, AND PRINTING

Owing to shortage of staff and altered printing arrangements due to the war, and less time available for proof reading, we ask our readers' indulgence for typographical and other errors they may observe from time to time, also for poorer paper and printing compared with pre-war standards

F.B.I. and Post-War Industry

SOME interesting comments on the likely future of industry were made by Sir George Nelson, President of the Federation of British Industries on October 29 in Manchester. He said he was convinced that if industries were to become nationalised we should become a second-class nation, and our workpeople would not be able to retain their present standard of living. It would mean the gearing of industry to the State machine, and its speed would be that of the slowest unit. He suggested that there was no virtue in a nationalised institution, even if it operated without profit, if it meant that the public paid more for the same product than it would if that product were made by private enterprise. As Sir George Nelson pointed out, no new trade or industry owes its origin to the State. Nor can it be overlooked that State control does not have to pass efficiency tests; it survives in spite of itself and at the expense of the community. There will be widespread agreement with the speaker's point that such mistakes as have been made by private enterprise have been nothing like as costly as those of statesmen and Government departments. The aim of private enterprise was to get a job done and to supply a need. The pressing need of these times, particularly in countries like Great Britain, was more speed, and that was the one thing that would assuredly not be secured from the State official.

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China's Future Development

Dr. Wellington Koo, the Chinese Ambassador, in a recent address to the Royal Empire Society, dealt at some length with the future of China. In the course of that country's approaching industrialisation, Dr. Wellington Koo said, foreign collaboration in the form of capital and technical skill would be cordially welcome. After the present struggle there can be no doubt that China will engage in an extensive programme of economic reconstruction and more capital goods will be needed, such as machinery for various industries, and the Ambassador pointed out that it would also call for a large importation of locomotives, more vehicles, and engines of all kinds. The heavy industries would receive prior consideration in modernising the national economy, as the interests of national defence, as well as the needs of economic development, called for special attention being paid to this category of industrial effort. As the standard of living of the Chinese people rose and their purchasing power increased, more consumption goods would be imported.

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An Argentine View on the Railway Mission

So far, relatively little information has been forthcoming as to the activities or plans of the mission of directors of British-owned Argentine railway companies, all the members of which have now arrived in Buenos Aires. It is indeed unlikely that so early in the visit much progress could be reported, for not only are the problems facing Mr. J. M. Eddy, Mr. H. C. Drayton, and Lord Forres both great and complex, but the unsettled condition of Argentina's internal politics must add to the difficulties they have to surmount. A recent article in *La Prensa*, an influential Buenos Aires daily newspaper, has commented favourably on the presence of the mission in the Argentine capital, and states that it offers a valuable opportunity for reaching a permanent agreement which would ensure for the national economy an efficient and progressive railway system to meet the exigencies of the post-war needs which will arise from Argentina's development. At the same time it admits that the rehabilitation and essential expansion of the rail services will call for heavy additional investment, and it concludes with the realistic comment that capital will not be forthcoming so long as it is permitted to receive an inadequate return.

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Mr. Eddy on the Future of the Railways

At a luncheon held by the British Chamber of Commerce for the mission, Mr. Eddy reviewed the history of the lines since the last war, and pointed out that from 1933 to 1943 of a total capital of 2,600 million pesos as much as 1,200 millions had received nothing. All companies but one had declared a moratorium in respect of debentures. Only 525 million pesos or 20 per cent. of the total were receiving interest to date. The war had proved that railways were vital to the life of every country and they must be allowed to exist on terms which would enable them to acquire the most modern equipment. It was essential that the confidence of the public should be established. It was for the Government to decide how these objectives should be attained. He hoped transport would be looked on as a whole and that the railways would be allowed to organise their services with the right to engage in all transport, so that traffic could be handled in the most economical way. There were no inflated profits in the railways. He did not think it was generally realised that rebates for Government

traffic in a normal year represented a direct contribution to the State of no less than 13,800,000 pesos, much of which had been expended on roads.

The First Railway Hotel

Of the 53 railway-owned hotels in this country by far the greater proportion is in the provinces where nearly all the best-known are under railway management. It is therefore the more noteworthy that what was probably the first railway-owned hotel, that at Euston, was built in the metropolis. A prospectus, issued in April, 1838, forms the subject of a brief article on page 458. This was some months before the through line from London to Birmingham was opened, and at the time when the company began booking through passengers by a combination of rail and road. A special general meeting of the London & Birmingham Railway, on July 11, 1838, authorised "the vacant ground . . . in front of their station in Euston Grove" to be let to the hotel syndicate "believing the advantages to be derived by the company from this appropriation of the land in question will more than counterbalance any pecuniary advantage that might otherwise be obtained from it." It was stipulated that the railway directors should "have a permanent control over an undertaking the main object of which is to promote the success of the railway by providing for the comfort of families and individuals who travel on it." The post-war importance of the railway hotel, both in the national interest and in relation to the transport industry, was emphasised in an editorial article in our September 10 issue, page 247.

Staggered Hours in London

Although comparatively little prominence has been given recently to the subject of staggering hours of work in order to relieve the pressure on transport services, steady progress continues to be made. The adoption of such schemes in industrial districts during the past three years has proved so advantageous to workers, managements, and transport undertakings that the continuance of such arrangements has become a matter of routine. In the greater London area there are now 51 local transport groups—four more than last winter—responsible for the daily traffic movements of over 500,000 workers. Last winter the London Passenger Transport Board appealed to Government departments and business houses in the City and West End to stagger working hours. The question was actively pursued during the summer, and many large groups of employers are now co-operating to spread the general traffic movement between the transport services which are available. Some education authorities also have helped by making a later start in the morning, so that children do not travel at the same time as workers, but there are still employers of labour and many schools who have not participated, who could do so with advantage, not only to the transport undertakings but for the general well-being of employees and pupils respectively. It is often only a matter of altering the time of beginning work by 15 minutes.

German Evacuation Traffic

In this country, our expectation of heavy air raiding caused the authorities to plan the large-scale evacuation of children and elderly persons from thickly populated areas immediately before the outbreak of war, or in its early stages, and the British railway companies have thus not been faced with the problem that is now perplexing the Reichsbahn. Germany has recently decided upon the planned evacuation of danger areas in expectation of air attack, but has been faced with the attacks before the movements have been effected. In consequence, two types of evacuation movement have become superimposed, one the planned system, and the other the emergency measure. The latter, which assumes the severing of telephone communications (said to be customary after a heavy R.A.F. raid), is based on the maintenance of a shuttle train service from the devastated area to a temporary concentration point, and the subsequent distribution from this point to the various final reception areas. Some further details of the Reichsbahn evacuation traffic are included in "Transport Services and the War" this week, page 466.

Local Transit in Rome

Shortly before the change of regime in Italy, the decision was taken for the Società delle Tranvie e Ferrovie elettriche di Roma (commonly known as the Stefer) to take over the services and equipment of the Azienda Tranvie Autobus del Governatorato di Roma (known as the Atag). It is not known whether this arrangement will be maintained in the changed circumstances, but in any event, the matter is mainly of domestic interest, as all the Stefer shares are owned by the Atag. The Stefer owns and works the following narrow-gauge electric lines connecting Rome with the hill country to the east, known as Castelli Romani: Rome to Bivio Grottaferrata and Frascati; Bivio Grottaferrata to Valle Violata, Marino, Castel Gandolfo, Bivio Lanuvio, and Velletri; Rome to the Ciampino Aerodrome; Valle Violata to Rocca di Papa; Ciampino Aerodrome to Albano, Ariccia, Genzano di Roma, and Bivio Lanuvio; Bivio Lanuvio to Lanuvio; and Genzano di Roma to Nemi. The Stefer recently increased its share capital from Lire 8,500,000 to Lire 35,000,000, by the issue of 106,000 shares of Lire 250 each. New shares were offered to existing shareholders in the ratio of 107 to 33. In addition, the company floated a 5 per cent. debenture loan of Lire 31,000,000. Debentures were offered to old shareholders in the ratio of 31 for every 70 new or old shares.

C.T.C. Suggested for Central of Brazil Railway

The steady development of the great resources of Brazil, accelerated by its entry into the war, has directed attention to the possibility of increasing the general efficiency of some sections of railway line by installing improved signalling. On some routes there is, apparently, little signalling; but on others modern equipment has been in service for some time. The apparatus installed for the electrification of the suburban lines of the Central of Brazil Railway about five years ago was of the most recent design. The question of increasing the capacity of the single-track main line of that railway between Barra do Pirahy and Lafaiéte, especially from Santos Dumont onwards, is under discussion; and Senhor R. V. Toller, in a report to the Railway Engineering Congress, recently published, compares the effect of increasing the number of block posts with that of adopting centralised traffic control, the fundamental principles of which he clearly explains. It is natural that a system of working which has proved so satisfactory in North American conditions should appeal to railways in the South American continent; and it seems likely that eventually it will find application there, although the provision of suitable maintenance staff is likely to offer some difficulty.

An Unexplained Blunder

The circumstances attending the collision at Scarborough on August 10, 1943, were never in doubt as the signalman at once admitted full responsibility. As the summary of Major Wilson's report appearing at page 467 shows, the approaching express from Hull should have run to a certain platform, and the signalman knew this and believed he had so arranged. He had cleared a home signal leading to an occupied line, however, for which he had left the leading pair of points standing after dealing with a railcar shunt movement. He could not explain his taking hold of the wrong—and unfortunately free—lever nor his omission to use a lever collar when he sent the coaches of the waiting outgoing train into their platform. It had been his practice always to do this. There was no track circuiting in the line concerned, but it was in full view of the box. In any case he knew where the vehicles were and did not realise his mistake until he saw the arriving train passing in front of the box instead of behind it. The layout, Major Wilson points out, is old-fashioned and modernisation is recognised to be necessary. The gantry with seven splitting home signals is typical of old N.E.R. practice. It is to be doubted whether there was ever another line which had so many gantries and so many elaborate groups of semaphores.

An Efficient Junction Renewal

The exigencies of the war do not make it possible always to give details of interesting permanent way work performed until considerably after the time at which it took place. Within this category falls the renewal of permanent way at a junction in Scotland, of which some details and illustrations are given in an article elsewhere in this issue. Because of wear and tear it became necessary to renew the connections between the station dock lines and sidings and the lines of a branch, and the diamond crossings from the dock lines and sidings, linking up with another branch, at a junction on the L.M.S.R. in Scotland. Notwithstanding the complexity of the work to be undertaken it was very expeditiously carried out. Opportunity was taken to bring the old layout into conformity with Ministry of Transport standard regulations, which required sharper angles of the obtuse crossings. This necessitated a considerable slue of one of the branches at a signal box, and precluded the possibility of splitting the work into separate operations. A complete assembled layout was set out in a goods yard about ¼-mile by rail from the actual site. It was later transferred to the permanent site, as far as possible in sections complete with timbers

and signal fittings. The relaying operations began on a Saturday night, and the whole of the new permanent way was linked up by 9.30 p.m. on the next day.

Shunting Power from Storage Steam

In various industries in which the fire hazard is great, use is made of fireless steam-locomotives in which the part of boiler is played by a strong cylindrical vessel charged from time to time with water and steam from a stationary high-pressure boiler installation. Enough energy can be carried in this way to perform some hours of useful shunting. The normal steam-shunter carrying its own fire and boiler is sometimes called upon to draw on energy reserves in the same way; this happens if it has been standing for a long time and the fire is sufficient only to maintain working pressure in the absence of any demand for steam. Until a normal fire has been created by blast the engine relies on stored energy. It is probable that the ideal boiler for a steam shunter would be one having proportions very different from those of the usual locomotive boiler. The requirement would seem to be for a large storage-capacity, relatively-small grate and firebox, but an extensive tubular heating-surface sufficient to give a high degree of economy in heat transfer. The draught needed would be steady and would be provided best by fan as in stationary-boiler practice.

Bulkheads in Box Wagons

In the United States, where it is the invariable practice to carry freight in large bogie wagons from 40 to 50 ft. long, the campaign to secure maximum wagon utilisation in wartime has aroused various problems in loading, and especially in protecting "less-than-carload" consignments from damage. One method which is being used to advantage is the bulkhead, or variable partition, which is in use by 29 individual railways, and at 80 different freight depots. Bulkheads avoid the necessity for trimming the load in a wagon when it is higher at one end of the wagon than the other; they separate through loads from those to be unloaded at intermediate stations; they keep apart different kinds of freight; and in these and other ways they enable box wagons to be loaded to their maximum capacity with miscellaneous freight, and without risk of damage or complicating the work of unloading. Objections to the plan are the difficulty of ensuring the return of bulkheads to the starting-point, and damage that has been caused to the sides of box wagons when removing bulkheads that have been secured with anchor-plates. Bulkheads should be slightly narrower than the internal width of the wagons, and should be secured by wedges.

New York Central Freight Locomotives

At the end of 1940 the New York Central System placed in service fifty 4-8-2 locomotives of the "L3" class, as described in *The Railway Gazette* of February 7, 1941, page 147. Twenty-five of almost-identical design now have been supplied to the system by the Lima Locomotive Works. These constitute the "L4" class; they have 72-in. driving wheels in place of the 69 in. wheels of the earlier class; and the cylinder diameter has been increased from 25½ in. to 26 in. An interesting feature of both "L3" and "L4" engines is the employment of 14 in. piston valves; these are given the unusually-large maximum travel of 8½ in. by Baker valve gear. Although intended primarily for freight work, the new locomotives are suitable for passenger-train speeds of up to 80 m.p.h. The ratio of unbalanced reciprocating mass to the total mass of the locomotive is 1/366; over-balance responsible for dynamic augment is 115 lb. in each front driver, 166 lb. in each main driver, 132 lb. in each intermediate wheel, and 115 lb. in each rear wheel.

Missing Masterpieces

In pre-war days the passenger's appreciation of the comfort and security of his express train was often heightened by his passing the time in reading tales of murder and violence. Novelists exerted themselves to provide bookstall literature that worked the purchaser up to a pitch of luxurious horror between Euston and Carlisle, then unwound him gently through further pages of triumphant virtue and just retribution onwards to Glasgow. We mostly look in vain for similar publications today. Bookstall counters express the utilitarian leanings of the present time. Many pens will teach us to make our gardens grow, to understand the politics and aspirations of our various Allies (often with the uncomfortable suggestion that they are nobler than our own); and to proclaim unhesitatingly that two remote specks in the sky are respectively a Mitchell Marauder and a Lockheed Hudson. Few remain to instruct us how to unmask the murderer of the old squire or the blackmailers of the beautiful heiresses. No doubt the ingenious authors are now forecasting Allied strategy for the Sunday newspapers.

The Lords Debate on Transport

IN the House of Lords on October 27, the Earl of Listowel inaugurated a debate on inland transport, and early in his speech referred to the articles recently reprinted from *The Railway Gazette* and published in a pamphlet entitled "A National Transport Programme."* He said that there was on all sides widespread public anxiety as to whether the Government was preparing plans for the future of transport. It was impossible to work out plans for post-war reconstruction of this country without a rough idea of how transport would be organised. He suggested that the first essential was the unification of all branches of transport under a common authority, and that the second was that it should be subject to a measure of public control and supervision. He submitted that the question to be decided was whether control of the railways should be restored to a private monopoly, or whether control should be vested in a public board responsible to Parliament.

Lord Brabazon of Tara pointed out that the State had hired the railways during the war at the arbitrary figure of £43,000,000 a year. The railways had made an enormous amount more than that, and he asked whether the Government was going to hold on to the railways until their net receipts fell below £43,000,000, and then hand them back, or what was to be the policy. He added: "It seems like a very immoral piece of sharp practice to hire the railways at a rate determined by itself, to hold on to them until the earnings fall below that rate, and then to hand them back to the companies. Some pronouncement should be made as soon as possible as to what is going to be done in this matter." He thought that this might be the best way of getting the railways going as one concern. Amalgamation, or whatever system was adopted for the railways, was not going to put them in a very good position after the war, unless some of the forces eating at their vitals were attacked. One of these was the long-distance coach; another was the hauliers, which numbered approximately 60,000. He suggested that transport was not competitive, and that it should be run as one entity with the various parts complementary one to another. He instanced the services provided by the London Passenger Transport Board as an example of his point. The London Passenger Transport Board was not his idea of nationalisation, which was something run by State officials, by civil servants who, admirable as they were, were not enterprising people to run commerce.

Lord Essendon referred at some length to the position of coastwise shipping, and said that he was aware that coastwise shipping and the railway companies some time ago had established a commercial understanding between themselves, but it was important that these agreements should be extended to include all forms of inland transport. The Chamber of Shipping, on behalf of the coastwise-shipping trade, had approached the other parties with a view to joint discussions to include all forms of inland transport. The salvation of the future of the coasting trade lay in due provision and arrangements being made between the parties concerned—road, rail, coastwise shipping, and canals alike—for a sensible and effective scheme of co-ordination, all working together instead of in separate compartments. He thought that the great objection to the inland transport system coming under Government control would be that it would not deal with transactions from a purely business point of view, and would inevitably be influenced by a multitude of political and other considerations.

Lord Sempill contrasted railway freight-train speeds and loads with those of road hauliers, and said that the railway favoured bulk loads of some hundreds of tons a train, as only in such bulk was rail carriage remunerative, whereas the motor vehicle loads ranged from 5 cwt. to 10 tons, or not much more. Preference for large unitary loads with few stations encouraged the development of towns whose consumption was adequate to take delivery of these large loads. That was against the tendency of planning today.

Lord Leathers, Minister of War Transport, replying to the debate, said that the development and co-ordination of inland transport after the war was a vast and complex subject, not to be solved by any single panacea, nor could any political or economic dogma be swiftly translated into a single practical solution for so varied an industry. After the war, as never before, we should be dependent on export trade, not only for our prosperity, but for our survival. He had to keep in the forefront of his mind the need to give every opportunity for trade, and particularly for the export trade, by providing a really cheap and efficient service. By "cheap" he meant a transport system so co-ordinated and run that it could, and did, provide, the best possible service with the least real cost to the community as a whole. The persistent road-rail problem was the main one to be solved. Only when the outlines of a solution were accepted would the railways and the road hauliers be able to plan their own future with confidence. The war had made it clearer than ever before that the railways were a national asset

* "A National Transport Programme—The Approach to a Long-Term Plan," price 1s., *The Railway Gazette* 33, Tothill Street, London, S.W.1

which had to be retained in full efficiency. That was absolutely necessary, not only for trade and industrial purposes, but for defence. From this it followed that the financial position of the railways had to be firmly established. We could not allow so vital a service to be starved of proper maintenance and improvements because of shortage of funds, or of inability to raise new capital.

The Minister went on to say that this point could be met by placing the credit of the Government behind the railways, by nationalisation, and the same end could also be achieved by creating conditions under which the railways could operate at a reasonable profit margin; in deciding on its course, the Government would be influenced solely by practical considerations, and it would seek to obtain the best results with the minimum of dislocation.

In the foregoing sentence it is important to note that Lord Leathers put forward three possible courses. In the official report ("Parliamentary Debates," October 17, column 384) and in daily newspaper reports the sentence included the phrase "placing the credit of the Government behind the railways by nationalisation," with no punctuation after the word "railways." We have made inquiries at the Ministry of War Transport and obtained confirmation that the sentence as we have reproduced it above conveys the intention of the Minister.

He did not believe the Square Deal proposals by themselves would solve the problem. In his view they failed to reach the root of the problem, and, indeed, the Transport Advisory Council and the then Minister considered them as merely a stop-gap arrangement. He was convinced that some more radical solution had to be found, but he was not yet able to bring forward precise suggestions. Dealing with Lord Brabazon's point on the railway agreement and its expiry, Lord Leathers said that it was provided in that agreement that it should continue for the period of the war and one year thereafter. He could not indicate how that would be interpreted when the time came, but it would show that the Government had no intention of continuing to take the profits from the railways for the sake of doing so for a period completely undetermined. Transport existed only to serve other interests, and activities, and its development had to be determined by their needs. It would be premature for him to deal with details of transport planning at this stage, and in advance of the production of the wider plans in which transport improvements would take their place. He would mention only that there were many other major points for consideration here, such as electrification, continuous braking of freight rolling stock, standardisation of wagons, and so forth. He was glad to know that the railways were themselves considering many of these problems closely.

Turning to road transport, the Minister said that he was much encouraged by the progress which was now being made towards the amalgamation of the main associations of road hauliers, but that the existence of so many separate and small units in the road haulage industry vastly increased the difficulties of bringing about any permanent co-ordination between it and other forms of transport. He paid tribute to the work that had been performed by coastwise shipping, and said that but for the relief the coasters had given to railways, our transport system would have been seriously blocked during the war. The co-ordination, and possible amalgamation, of the Channel-packet services was being examined by the railway companies, and certain of the coasting liner interests were pursuing schemes of consolidation. Discussions were proceeding between the railway companies and the Dock & Harbour Authorities Association, aimed at securing greater co-ordination between all dock and harbour undertakings. The railway companies were now in process of becoming members of the Association, and this was a most welcome development. Our island was so small and the train services between the main centres of population in peacetime were so good that the scope for internal air services was necessarily limited. There would be a number of services, many of them including a short passage over the sea, for which the air was eminently suitable, but if the landward approaches to the airport were bad, much of the aircraft's speed was lost.

He concluded by saying that the primary purpose of the establishment of his department was to weld the various forms of transport into one articulated engine for the waging of war. The main wartime problems of transport co-ordination had been solved, although the wartime problem was much simpler than the peacetime problem. They had to retain this spirit in peace, and he believed that both the department and the industry had learnt most valuable lessons. The problems of post-war co-ordination of transport would not be solved on doctrinaire lines. In addition to the thought being devoted to the subject by his department, many leaders of the various branches of transport were working on these problems, and the Minister said he had already had exploratory discussions with some of them. Before he propounded major proposals to the House he intended to satisfy himself that they were fair, workable, and well calculated to achieve the object in view.

Lord Leathers' statement brought a revival of interest of the Stock Exchange to home railway stocks. It was held that the Minister's remarks on the need for establishing the finances of the lines greatly minimised the uncertainty which had previously impeded investments in the securities of the companies.

Argentine State Railways

THE Argentine State Railways, unlike the company-owned lines, close their accounts on December 31, instead of June 30. The report recently to hand for 1941 records in considerable detail the activities of the six separate railways which make up the system and shows that, notwithstanding the difficulties caused by the war, they were able to maintain uninterrupted progress. Not only did profits increase, but it was also possible to distribute a bonus to the staff. The mileage of line operated was as follows :—

	Miles
Central Northern Railway	6,188
Eastern Railway	406
San Antonio Railway	709
Central Chubut Railway	166
Comodoro Rivadavia	129
Puerto Deseado Railway...	178
	7,776

The above mileage is composed of four different gauges :—

Metre-gauge	6,188
Broad-gauge (5 ft. 6 in.)	826
Standard-gauge (4 ft. 8½ in.)	406
0·75 metre-gauge	356
	7,776

The Argentine Republic is divided into 14 Provinces and 10 National Territories, and there are State lines in all of them, except four of the National Territories. An idea may be gained of the vast extent of the territory served when it is pointed out that the extreme North of the State Railway system lies in the tropics, slightly farther North than the city of Rio de Janeiro, and the Puerto Deseado line in Patagonia is the most southerly railway in the world. The Central Northern Railway constitutes the major part of the system and connects Buenos Aires with Bolivia, *via* Tucuman, and with Chile, *via* Mendoza; a third international route is in process of completion which will provide direct rail communication with the Chilean port of Antofagasta, *via* Tucuman and Salta. The following are the financial results of working of the six railways for 1941 :—

	Gross receipts $	Working expenses $ ('000 omitted)	Net receipts $
Central Northern Railway	102,094	82,446	19,648
Eastern Railway	2,204	2,329	Loss 125
San Antonio Railway	3,386	3,291	95
Central Chubut Railway	508	407	101
Comodoro Rivadavia Railway	463	505	Loss 42
Puerto Deseado Railway...	294	367	Loss 73
	108,949	89,345	19,604

The following results of all the lines during the ten years 1932-41 indicate the considerable progress which has taken place :—

	Gross receipts $	Working expenses $ ('000 omitted)	Net receipts $		Gross receipts $	Working expenses $ ('000 omitted)	Net receipts $
1932 ...	47,240	52,839	Loss 5,599	1937 ...	62,741	54,649	8,092
1933 ...	47,621	47,425	196	1938* ...	92,840	75,098	17,742
1934 ...	53,093	48,281	4,812	1939 ...	98,669	81,388	17,281
1935 ...	56,649	50,449	6,200	1940 ...	104,205	86,292	17,913
1936 ...	61,808	52,806	9,002	1941 ...	108,949	89,345	19,604

The growth of traffic during the ten years 1932-41 was as follows :—

	Passengers number ('000 omitted)	Goods tons		Passengers number (000 omitted)	Goods tons
1932	2,305	4,357	1937	3,403	5,815
1933	2,196	4,170	1938*	7,944	8,739
1934	2,461	4,763	1939	9,250	9,074
1935	2,819	5,369	1940	9,696	7,911
1936	3,237	5,447	1941	10,322	8,229

* ex-British-owned Cordoba Central Railway included in the State Railway System from February 1, 1938

In 1941, 64 per cent. of the total number of passengers were carried in one-class railcars most of them diesels. There were 105 vehicles in service, made up of 72 single railcars and 11 three-coach trains. The report states that the three-coach diesel trains operating between Retiro (Buenos Aires) and Rosario (about 200 miles) are already transporting the maximum number of passengers practicable with the stock available.

The Central Northern Railway transports the bulk of the goods traffic, of which the details for 1941 were as follow :—

	Tons	Average haul miles
Forestal products	1,454,884	368
Sugar cane	1,131,043	14
Sugar, alcohol, and molasses ...	376,270	505
Cereals and linseed	502,993	241
Petroleum	387,513	420
Building materials	358,450	231
Stone	327,088	168
Fruit and vegetables	239,269	507
Cotton	126,869	207
Cattle	229,949	286
Minerals	223,021	528
Wine and beer	198,101	505
Flour	149,292	407
Other traffics	624,421	349

The remarkably long average hauls are the reflection of Government policy to develop the far-distant interior and potentially less productive zones of the country, which were not sufficiently promising, from a revenue-earning standpoint, to attract private capital.

The net revenue, including income from ancillary services, amounted to about $21,000,000, which was allocated as follows :—

	$
Interest payable on Cordoba Central Railway purchase price	5,168,000
Payment under agreement with French Railway Company in the Province of Santa Fe	955,000
Salaries of ex-Cordoba Central Railway staff rendered surplus	86,000
Contributions to cost of water supply of towns in the interior ...	347,000
Bonus to staff	1,224,000
Contributions to renewals and other reserve funds	13,220,000
	$21,000,000

Evidently, it is the policy of the Argentine Government to treat the capital cost of the railways and the corresponding liability for interest as direct charges on the national exchequer and to devote the net revenue from the working of the lines to the improvement of the permanent way and equipment and the development of the territories which they serve. The report gives a great deal of enlightening information as to many important engineering works which have had to be slowed down or suspended.

Great Southern Railways (Eire) Reorganisation

SINCE its formation in 1925 the Great Southern Railways Company has had to submit to drastic changes both in its fortunes and in its capital structure, notwithstanding its ownership and operation of virtually all the railways situate wholly in Eire. Its mileage worked has been reduced also from 2,053 route-miles owned and 128¼ route-miles, leased or worked, to 1,922 route-miles owned and 128¼ leased or worked. Under the (Irish Free State) Railways Act, 1924, four undertakings were amalgamated, namely, the Great Southern & Western, the Midland Great Western, the Dublin & South Eastern, and the Cork, Bandon & South Coast; and 22 were absorbed. For the first six years of its existence the company managed to pay a 1 per cent. dividend on its ordinary stock, and ½ per cent. was distributed in respect of 1931, but neither the ordinary nor the 4 per cent. preference stocks have received anything since then. Even the guaranteed preference payments have not been complete, as none has been made since the arrears for 1938, 1939, 1940 were satisfied out of the earnings of 1941.

A serious reduction of capital was enforced on the company as from July 1, 1933, by the Free State Government under the Railways Act, 1933. The stock cancellations were £1,942,207 in the case of the 4 per cent. guaranteed preference stock, thus reducing it from £3,885,374 to £1,943,167; £3,292,240 in the case of the 4 per cent. preference stock, thus reducing it from £5,068,464 to £1,776,224; and of the ordinary stock no less than £6,989,196 was cancelled, bringing it down from £7,767,123 to £777,927. Debenture stocks have been written down by 10 per cent. to £7,076,972, and redeemable debentures and loans, and stocks specifically charged now amount to £1,117,161. Other features of the Act of 1933 were that it reduced the number of directors from twelve to seven and abolished the representation of the London Midland & Scottish Railway Company on the board. The Act also prescribed the method of election of directors by a scheme of postal voting. In consequence of the reduction of capital, Section 5 of the Act required a modification of the standard revenue, and, after holding an enquiry, the Railway Tribunal reduced it from £1,169,899 to £561,188.

The Free State Road Transport Act, 1933, gave the railway company wide powers of acquiring road transport concerns operating in the area served by its system, and with the aid of these powers, it has obtained, to a great extent, but not completely, a monopoly of road transport, except in certain specified areas round Dublin, Cork, Limerick, and some other ports. A substantial revenue from its road undertakings has been earned by the railway company for some years past, and the payment of debenture interest for the year 1942 was only possible because of the net revenue derived from these services. There was nothing over for renewals and improvements, and the necessity for some reorganisation of the capital structure was emphasised by the Chairman at the annual meeting this year.

Some reorganisation was, therefore, only to be expected, and the plan announced last week has led to widespread improvement in the prices of the company's stocks on the Dublin Stock Exchange, on the assumption that the Government will support the scheme. The proposal is to form a statutory company with a capital of £20,000,000 made up of £4,000,000 in common stock (with a maximum dividend of 6 per cent.) and of £16,000,000 in 3 per cent. Government-guaranteed redeemable debenture stock. The new company would liquidate, by agreement, the redeemable debentures, loans, and stocks specifically charged and would acquire the Great Southern Railways Company and issue new stocks for existing stocks on the following basis. Holders of £777,927 ordinary stock and £1,776,224 4 per cent. preference stock should receive £ for £ in new common stock; holders of £1,943,167 guaranteed 4 per cent. preference stock should receive £ for £ half in common stock and half in 3 per cent. Government-guaranteed debenture stock; and holders of £7,076,972 4 per cent. debenture stock should receive 3 per cent. Government-guaranteed debenture stock £ for £.

There are still plenty of uncertainties for stockholders and the trading and travelling public. The assumption of a Government guarantee has been discounted by a suggestion that the plan may be amended in the Dail, where the Government majority is not large.

Post-War Improvements in Goods Wagons

ON another page we publish, under the above title, some comments received from a correspondent dealing with the need for equipping goods trains with continuous brakes and central couplings. Our correspondent, it will be noticed, considers the matter solely from the viewpoint of the railway companies themselves, and does not take into account the important fact that although the railways owned in 1940 some 652,000 wagons, there were also about 650,000 privately-owned wagons in service, so that the improvements envisaged could hardly be justified unless the private owners also were prepared to adopt them. It is not impossible, however, that the time may arrive when such reforms come to be considered as a national necessity, when companies and private owners alike may be obliged by law to adopt continuous brakes, and perhaps even standardised centre couplings as well, for all freight stock.

Some other economic considerations, however, have been advanced as reasons for the absence of continuous brakes in this country. In Great Britain the time spent by wagons at terminals and in marshalling yards is disproportionately long in relation to the average time on the actual running journey; in fact, the traffic normally moves to a greater extent in isolated wagon loads than in train loads. Continuous brakes would create a reduction in the number of wagons shunted per man-hour in marshalling and breaking up trains, and the limitation of load (an argument anticipated by our correspondent) would also operate. Screw couplings would also add to the time taken in shunting and would increase the danger to which the shunters are exposed.

The standardised coupling of the future should therefore be automatic in action, so as to avoid the waste of time involved in the use of screw couplings; it should be automatically coupled to the train pipe; it should not add to the tare weight; it should not be easily damaged; and it should be able to negotiate sharp curves. It does not appear that any design of automatic coupling yet meets all these requirements; and even if it did, the suitability of the framework of the wagons for such a coupling would have to be considered very carefully. A centre coupling of the automatic type has very different buffing qualities from the present standard coupling; and for the best results with it the solebars should be set close together on each side of the horizontal centre line, with auxiliary channel irons to support the outer edges of the body. This involves a radical change from the conventional British design of the underframes, which presupposes buffers set wide apart.

A notable attempt to improve on the present situation, without attempting the more radical reforms advocated by our correspondent, has been made on the Great Western Railway which has developed the Instanter three-link coupling to give greater compression of the buffer springs than the ordinary three-link coupling, without the necessity of shunters going between the wagons. The adoption of a generally acceptable coupling of this type on all wagons, we feel, would at once make possible the faster running of freight trains, even with no other addition to the equipment.

As was stated in our October 22 issue, freight trains today are of three main categories: (*a*) "piped" box wagons which can be operated from 50 to 55 m.p.h.; (*b*) partly braked trains; and (*c*) unbraked trains of 8-ton to 20-ton wagons having three-link chain couplings. If for any reason the fitting of improved couplings for freight vehicles had to be postponed, a partial reform at least could be effected by substituting chains of low-alloy steel, containing, say, 1½ per cent. manganese, and flash butt-welded, for the existing wrought-iron chain, which is too weak for its present duties, and deforms immediately it is put into service.

LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

A National Transport Programme

Metropolitan-Cammell Carriage & Wagon Co. Ltd.,
Metropolitan Road, Saltley
October 28

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—With reference to the pamphlet entitled "A National Transport Programme," in para. 2, p. 8, under the heading of "Problems of the Peaks" you state that there were in this country before the war 47,000 railway carriages.

We had always understood that the number, including the L.P.T.B., was nearer 63,000, and we give below an analysis extracted from the "Universal Directory of Railway Officials," 1943-44 edition. In most cases it is stated therein that the figures quoted are based on the 1939 position.

Railway	Passenger coaches (steam hauled)	Railcars (I.C. engine)	Railcars (steam)	Passenger coaches (electrically hauled)	Total
G.W.R.	8,697	18	—	—	8,715
L.M.S.R.	23,541	6	5	268	23,820
L.N.E.R.	17,904	—	340	*	18,244
Southern	5,413	—	—	3,032	8,445
	55,555	24	345	3,300	59,224
L.P.T.B.	74	—	—	3,629	3,703
	55,629	24	345	6,929	62,927

* In the case of the L.N.E.R., the Tyneside electric stock is not shown separately and the figures are, therefore, presumably included in the total of 17,904 passenger coaches.

In the light of the foregoing, we should be glad to know why the figure of 47,000 carriages only is mentioned in the brochure.

Yours faithfully,
H. N. EDWARDS,
Commercial Manager

[The figure of 47,000 was for the year 1938, and related only to passenger-carrying vehicles as follows:—

	No.
Passenger carriages (Steam stock)	
Of uniform class	28,760
Composite	9,383
Restaurant cars	724
Rail motor vehicles (Other than electric)	
Steam	91
Petrol	7
Petrol-electric, oil and oil-electric	28
Passenger carriages (Electric stock)	
Of uniform class } motor vehicles	1,794
Composite ... } motor vehicles	192
Of uniform class } trailer vehicles...	1,087
Composite ... } trailer vehicles...	1,046
Sleeping cars	380
Total passenger-carrying vehicles	43,492
L.P.T.B.	3,263
Grand total ...	46,755

The figures in the "Universal Directory of Railway Officials" include all types of coaching stock, parcels vans, guards vans, etc.—ED. *R.G.*]

"Converted Royal Scots"

21, Briarfield Road, Tyseley,
Birmingham. October 29

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Regarding the particulars of the L.M.S.R. 4-6-0 "Converted Royal Scot" locomotives in your issue of October 8, most unfortunately the firegrate area figures were transposed. The grate area of the new boiler is 31·25 sq. ft. and not 31·2 sq. ft. as stated—a slight error which perhaps may be corrected. The tractive effort (not included) remains unchanged at 33,150 lb.

It may be interesting to recall that the weight in working order of the "Royal Scot" engine and tender as constructed in 1927 was 127 tons 12 cwt. In 1934 the engines were equipped with the new "9000" class high capacity tenders carrying 4,000 gal. and 9 tons. This brought the weight of engine and tender in working order up to 139 tons 11 cwt. Most of the tenders so fitted were taken from the 3-cyl. "5X" passenger engines constructed by the North British Locomotive Co. Ltd. in 1934 (Nos. 5557-5606), and a few of the engines are fitted with high-capacity welded tenders manufactured at Crewe in 1937 and 1939. With the fitting of the enlarged 2A coned boiler the weight of engine and tender in working order is again altered to 137 tons 13 cwt.

The Advertising & Publicity Officer, L.M.S.R., has very kindly informed me that the first twenty "Royal Scots" are being re-boilered as the work becomes necessary, and to date three engines have been dealt with. These are Nos. **6103**, *Royal Scots Fusilier*, **6108**, *Seaforth Highlander*, and **6109**, *Royal Engineer*.

Yours faithfully,
A. RICHARDS

Clock Synchronisation on French Railways

Comité Français de la Libération Nationale,
Commissariat aux Communications,
Délégation de Londres,
3, St. James's Square, S.W.1
October 23

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—I have read with interest the article published in *The Railway Gazette* dated October 8, 1943, on the subject of clock synchronisation on the C.N.R. It may be also interesting to your readers to know what was done on the French railways about the same subject.

On account of the heavy traffic involved by many trains, starting at very short intervals on suburban lines, it had been decided ever since 1932, that trains should start off at the exact scheduled time of departure. Since then, there could be seen on the railway platforms of the Gare St. Lazare, in Paris, electric clocks with a large hand moving every second until the time of departure, when the electric train started to the second. To achieve this result, it was necessary to synchronise all the clocks of the great station, as well as those of all the other stations of the system. This synchronisation was effected as follows:—

Every day, at a given time, the grand master clock checked and reset the exact time, by means of magnetic relays, and through the dispatching circuit, in all the master clocks of the system. These relays switch on a current in auxiliary coils, which vary the field in the main coils, in order to alter the oscillations of the pendulum so as to accelerate or retard the master clock, as the case may be.

The automatic setting of time by means of the dispatching circuit has been applied, at first on suburban lines of the State Railways (actual West Region of the S.N.C.F.). Later on, the system was extended to the main lines Paris-Le Havre and Paris-Cherbourg; thus, thousands of clocks were readjusted every day, to the exact time given by the Paris Observatory.

Yours sincerely,
JEAN LEVY,
Directeur du Matériel et de la Traction à la Société Nationale des Chemins de fer Français

Transport and Its Track

42, Frederick Street,
Edinburgh, 2. October 31

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—May I continue this discussion? One hundred years ago there was a bad railway boom, and George Stephenson warned investors that some of the promotions were decidedly unwise. Later on some parts of railways were laid down to compete with existing ones. Thus at places we have two or more railways with their heavy capital expenditure and expensive oncosts where one would do. Neither of these things had anything to do with the advent of the internal combustion engine, and little to do with how and where industry would develop.

Bridges over our railways were (and are?) not designed to allow for increases in the loading gauge; and there is an appreciable amount of money sunk in stations and expensive platforms. These platforms also prevent the loading gauge from being increased. Road transport vehicles move as fast as on the railway, yet they have been invented and designed to permit of entering and leaving without platforms, and in many other countries railways do not have raised platforms.

The replacement value of railways does not come into the question. We have some Victorian houses which have a large replacement value, but they are a drug on the market even when there there is some scarcity of houses. We find that bungalows, like road transport, are more suited to many of our needs. Today road transport is constructing vehicles to carry 20-ton loads which are really railway traffic, but the railways cannot carry these loads at present without disassembling them, which is very expensive.

Is it not time rather than speed which is required as a factor of the finished product of the transport industry? Speed means measurement of power required + wear on track and rolling stock + fuel required. Time might be reduced by using a lower but more even speed.

"Four men—could transport—400 net tons, 400 miles in one working day." Is *this* the real leg pull or the nigger in the woodpile? Twenty years ago, when there was little competition from road transport, railways did not work at anything like these figures. About 1900 one railway introduced a new type of goods engine which hauled twice the pay load, but there was no perceptible difference in the balance sheet. True these men could do that work, but how many other men does the

railway have to employ to enable them to do it? And what percentage of the total traffic could be handled in this manner?

Accepting the statement that 0.34d. is the "impact" of the cost of track to railways, it is hardly reasonable for X.G.M. to suggest if he does, that this is the unit price which the road haulier should pay. A railway is equipped with an expensive practically flat track with easy curves, and it is fenced and bridged. Consequently it is to be expected that only a small percentage of the receipts would be required for the wages of the train crews and fuel, and that most would be required for other expenses. With road transport the vehicle crew is high relative to the weight, the gradients are severe, and there are many starts and stops or at least slows. Therefore it is to be expected that a larger percentage of the receipts would be required for the crews and fuel.

By percentages or by units road transport may pay less for the use of its track, but it does not by any means get such a good one—do not confuse with roadbed. Road transport uses a light vehicle and the pneumatic tyre, hence its rolling stock is easy on the roadbed, making upkeep expense light. The way our roads have stood up these last four years shows that. If a road transport company uses a heavy vehicle, or a solid tyre, or both, it is charged extra for these things both by licence and duties on fuel. Railways use heavy rolling stock, and wheels with solid treads, together with tractors which "hammer" the track. Track equipment is therefore relatively costly and upkeep relatively heavy.

The ratios of the various costs in the two industries should be different, therefore it should not matter what percentage of the receipts are required for track expense, but it does matter whether road transport as a complete whole is paying a fair amount for the use of its track.

The title of your valuable publication is "A National Transport Programme." To plan such a scheme, one of the first things to do would be to gain as sound an idea as possible of the state of the efficiency of each industry; X.G.M. is to be thanked for working out his figures. Another thing would be to find out the rate at which each industry is increasing its efficiency. For in this country the average haul is short and the average wagon load is small. What is happening in Germany with its very long average hauls just now should hardly apply to conditions in this small island.

Going by what road transport has done and is doing to increase its efficiency, it is probable that the future of transport in this island lies in the roads. My statement about considering converting the railways into super motor tracks "with a different roadbed from anything we know," is not a leg pull, though it may look like it. Remember that in the 1820s only a very few men could see the railways of the future, and that vaguely, and remember what they had to do to get this change in practice. Re-read what G. Stephenson had to do in pleading, urging, and persuading to get the locomotive adopted. "The principal inventions upon which modern industrial development is founded were all made by persons working independently of scientific research. They were also made in the teeth of opposition by the trades and crafts which they affected." (I.Mech.E.). Such a statement and others like it by recognised authorities are very very hard to understand. We think we have got past that stage; but if the guides of the railway industry could only realise the importance of them, and then take the necessary action in place of thinking or talking about them, they would soon find that the position of their industry was being appreciably strengthened, and that the transport problem was solving itself, as it did in the case of gas and electricity. Both of these industries have large sums invested in their tracks or distribution systems.

Yours faithfully,

S. MACDONALD

Publications Received

The British Austerity Locomotive. London: *The Railway Gazette*, 33, Tothill Street, Westminster, S.W.1. 11 in. × 8½ in. 8 pp. + large folding plate. In stiff paper covers. Price 2s. net.—When preliminary descriptions of the British-built "Austerity" 2-8-0 type tender locomotive were made available in November, 1942, considerable interest was evoked in the manufacturing economies achieved in a simple design in which fabricated and cast-iron parts are used wherever possible. By courtesy of the Ministry of Supply, *The Railway Gazette* was enabled to publish in its issue of September 10, 1943, a more detailed, illustrated description, accompanied by general arrangement drawings of both the locomotive and the tender. This article has now been republished in brochure form. The sectional elevations and plan of the engine form a folding plate, 27 in. by 15 in. Although these engines are being built primarily to meet war conditions, their retention in service after the cessation of hostilities is so likely, in view of the general characteristics of the design, that this booklet should prove of lasting value.

Universal Directory of Railway Officials and Railway Year-Book, 1943-1944. London: The Directory Publishing Co. Ltd., 33, Tothill Street, Westminster, S.W.1. 8½ in. × 5½ in. 570 pp. Price 20s. net.—Now that the war has spread to every continent and to most countries, it is impossible this year to obtain information direct from many places. Nevertheless the "Universal Directory of Railway Officials," which reaches with the present volume its forty-ninth year of publication, has once more been successful in securing up-to-date details of many of the world's railways to an extent that was not thought practicable in the early stages of preparation. Accordingly, the present edition should prove at least as valuable as its predecessors in containing within the scope of its carefully-condensed pages more comprehensive lists of officers and particulars of railways throughout the world than can be obtained from any other publication in any language. Among the sections which have been subjected to the most extensive revision and amplification are those relating to the Ministry of War Transport, and to railway-associated bus, road haulage, and air transport undertakings in Great Britain. Despite substantially increased costs of production, the price remains unchanged. The requirements of the Paper Control, strangely enough, are very much more severe on standard works of reference than they are upon fiction, for example, and the allocation of paper for this volume is but 25 per cent. in weight of that which was used before the war. Substantial economies have been achieved by the use of lighter and thinner paper, and by setting the Personal index in four columns a page instead of three; it has also proved necessary to restrict the size of the present edition.

British Locomotive Types. London: The Railway Publishing Co. Ltd., 33, Tothill Street, S.W.1. 9½ in. × 6 in. Price 8s. net.—This new edition of what has already come to be regarded as a standard work of reference is compiled by *The Railway Gazette* from official drawings supplied by the Chief Mechanical Engineers of the four main-line railways and by the Ministry of Supply. The publication in 1937 of the original collection of locomotive diagram drawings, compiled by the late Mr. Chas. S. Lake, giving the principal dimensions and other particulars of the engines belonging to the main-line railways of Great Britain, was undertaken to satisfy a growing demand on the part of readers of *The Railway Gazette* and *The Railway Magazine*. In successive editions the opportunity has been taken to add diagrams of new types; these were distinguished from the rest by allocating to each the page number of the preceding page with suffixes a, b, c, and so on.

In this, the fifth edition, further new types are included, notably the "Q1" and "Merchant Navy" class locomotives of the Southern Railway; also the various "austerity" locomotives of the Ministry of Supply. To save confusion, the page numbering has been revised throughout and there are no longer suffixes to distinguish the new diagrams from the original ones. Certain changes have been made in the standard forms of many of the older types of locomotive since our original diagrams were drawn; where these have occasioned only a slight difference to the external appearance they have been mentioned in a footnote. The time was felt to be inopportune for making blocks except in the case of new or greatly modified locomotives. Descriptive matter under the diagrams has been revised to accord with the latest available particulars.

This edition contains dimensioned drawings of 127 locomotives, each printed on one side of the page only. This method has been adopted as the most economical of paper in all the circumstances, as it facilitates the production of further revised editions with the use of the maximum number of existing plates, and necessitates reprinting only the leaves requiring modification; in addition, new leaves may be inserted in their appropriate position.

Speed Indicators with and without Recorders for all Classes of Railway Service.—In our issue for October 1, on p. 327, we published a short review of a booklet in French on the well-known Hasler range of speed indicators and recorders. We have now received from the Hasler Telegraph Works, 28, Victoria Street, London, S.W.1, the English edition of this book, which deals comprehensively with four instruments as follow: "Teloc" A.1031 Speed Indicator, "Tel" RT. 835 Speed Indicator & Recorder, "Teloc" RT. 935 Speed Indicator & Recorder, and "Tel" RT. 1036 Speed Indicator & Recorder. The first part of the book provides general descriptions and instructions for use. The second part gives a full technical description with explanatory illustrations of the interior mechanism. Installation and maintenance are discussed in the instructions for use. For driving the instruments there are the alternatives of flexible and rigid-shaft transmission; line diagrams illustrate applications of both kinds of drive. Folding diagrams give details of the construction of the "Tel" R.T. 835 instrument.

The Scrap Heap

Employees of the London Passenger Transport Board have contributed £20,000 in pennies to the Red Cross Penny-a-Week Fund.

* * *

"I've been right to the end, Pam, and there aren't any seats."

"How *awful*, Cath—we shall have to travel in this 'Ladies Only' compartment!"—*From "The Evening News."*

* * *

In five days recently the L.M.S.R. dispatched to the ports 53,069 mailbags containing 424,000 parcels for prisoners-of-war. Seven special trains and 286 vans were needed for the consignment.

* * *

HOLDING THE HAND LAMP

Can anyone explain why so many railwaymen, when giving a hand signal to driver or guard, think it indispensable to hold the hand lantern at an angle of 45 degrees and point the light at the neighbouring barrage balloon, while whistling themselves purple in an attempt to draw attention to a practically invisible signal?

* * *

MINOR PROBLEMS OF THE RAILWAYS

It has required six months' effort to enable the secretary of the L.M.S.R. Locomotive Sports Club, at Sowerby Bridge, to secure a permit to enable him to buy a football from a local sports outfitter. The departments he has dealt with include the Ministry of Transport, Ministry of Labour, the Factory Inspectors' Department, the Board of Trade, the Regional Transport Department, the District Transport Department, and the head office of the L.M.S.R. He has also been interviewed by officials from Manchester and Huddersfield.—*From "The Yorkshire Post."*

* * *

One of our readers has sent us a programme of a performance of "Lady Windermere's Fan," on Saturday, November 7, 1903, at the Midland Hotel, Manchester. The cover of the programme is reproduced below. As was recalled in our

September 3 issue, the Midland Hotel, Manchester, was opened on September 4, 1903, and the programme states that the play was the first performance on the stage of the Midland Hall, Midland Hotel, Manchester.

* * *

No fewer than fifteen Southern Railway stationmasters and goods agents have completed 50 years' service and are still in harness. Among them are Mr. H. C. Greenfield, Stationmaster at Waterloo, and Mr. E. Card, Stationmaster at London Bridge.

Fifty-two retired stationmasters of the company have returned to various clerical duties to assist during the war.

* * *

AS SHE IS SPOKE

Foreigners who learn English find it difficult enough without its many colloquialisms. One wonders what an English-speaking foreigner would have made of a remark heard at a bookstall yesterday. The speaker was a lady, who said:

"You haven't by any chance a diary, have you?"

Not only would he have been puzzled by the mode of speech—a fairly common one in these parts—but when he saw a railway timetable passed over the counter he would think it stranger than ever. The combination of timetable and diary which we know so well in Scotland, although the latter section is the less important, is invariably referred to as a diary. Even visitors from the South are puzzled by the term.—*From "The Glasgow Herald."*

* * *

THE NON-SMOKER

A repatriated wounded prisoner from Germany, Corporal Walter Wallace, of the Royal Scots, was travelling to his home at Chippenham to see for the first time his baby daughter. This incident, which occurred during the journey, is told in his own words:

"At Paddington the sergeant who was escorting me found two seats in a compartment. He pulled out his cigarette-case and gave me one. Immediately a civilian in the carriage drew our attention to a notice, and said abruptly, 'No smoking.'

"The sergeant replied, 'This is a repatriated wounded soldier. Surely you have no objection to his having a smoke?' The man answered, 'I have. This is a non-smoker.' So we got up and went out into the corridor and stood to have our smoke. Thank God this was not typical of the reception we found in England. Everybody else has been marvellous."—*From "The Evening News."*

* * *

GOVERNMENT "BIGGEST WASTER OF EVERYTHING"

The suggestion that there ought to be set up a special department of the Government to prosecute the Government when it offends against its own regulations was made by Alderman Sir Charles McRea, presiding at Guildhall recently.

The City Alderman had before him a stock and share dealer, summoned for breaches of the Paper Control (No. 48) Order by distributing "advertising circulars" in connection with his business.

Sir Charles McRea said: "The Government has prosecuted this man, but who is going to prosecute the Government? In this case it has thought it necessary to use five summons forms when one would have served the purpose. If that is not wasting paper, I would like to know what is. It seems to me that there ought to be a special department set up to watch the Government and prosecute it when it offends agaist its own regulations. One department of a borough council will prosecute another, and I do not see why the Government should not do likewise. In fact it is the biggest waster of paper, iron, steel, rubber, and everything else, and there is nobody to prosecute it. If such a department as I have suggested were created, I think it would be the busiest Government department of all."

Mr. Stephenson, who prosecuted for the Ministry of Supply, said he would report the remarks to the proper quarter.

* * *

Passengers who travelled on the Underground to town recently read a message from their old friend, Billy Brown. A plea—in verse as usual—its language most polite—for escalator passengers to stand upon the RIGHT.

"B.B." on ESCALATORS
£10 award for adding two lines to this couplet
Send suggestions which must be on a postcard to 'Billy Brown' London Transport, 55 Broadway, S.W.1 not later than December 19, 1943
Here's another bright suggestion
Standing RIGHT prevents congestion

"The message is in couplet form," said Billy Brown today.

"A verse requires another one, and for it I will pay.

"All entries must be sent to me, on postcards, and arrive

"At London Transport's offices at Broadway, 55.

"£10 will be the winning prize, and would you make it clear

"That my verdict will be final, that is usual, I hear."

So pencils now—and paper, for it's time to make a start.

Please bear in mind that London Transport staff cannot take part.

And, Poets of the Underground, one final thing remember—

The last date for your entries is the 19th of December.

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

RHODESIA

Railways and the Government

At a recent session of the Northern Rhodesia Legislative Council the unofficial members passed a motion expressing the opinion that the Rhodesia Railways should be acquired as soon as reasonably possible by a public-utility company or board, on which all territories concerned should be represented; and that the company or board should control all forms of transport.

It has been stated that Professor S. H. Frankel, Head of the Department of Economics & Economic History at the Witwatersrand University, has been investigating questions relating to the control of the Rhodesia Railways on behalf of the three territories concerned—Southern Rhodesia, Northern Rhodesia, and the Bechuanaland Protectorate. (The question of the future of the railways of Rhodesia was referred to in an editorial note on page 350 of our October 8 issue, in which it was stated that a commissioner is to be appointed by the British Government to investigate a proposal, made by that of Southern Rhodesia, for the Governments of Southern Rhodesia, Northern Rhodesia, and the Bechuanaland Protectorate to obtain control of the railway system in their territories.—ED. *R.G.*).

New Rolling Stock

To assist mainly in the conveyance of base metals for export by Rhodesia for war purposes, the supply of six locomotives and 100 wagons to the Rhodesia Railways has been arranged.

UNITED STATES

Increasing Railway Employment

The trend of railway employment is still upwards. By mid-June the number of railway employees in the U.S.A. had reached 1,381,560—representing an increase of 32,384 in one month—and was 6·84 per cent. greater than the comparable figure for 1942. Taking the average staff employed from 1935 to 1939 as the peacetime unit of 100, and allowing for seasonal variation, the staff level in June, 1943, had reached 135·4. Every category of employment showed an increase, both over the May, 1943, and the June, 1942, figures. Over the year, the largest individual increase was one of 11·57 per cent. in the number of yardmasters, hostlers or engine shed staffs, and switch tenders (shunters); the professional, clerical, and general group showed a 10·6 per cent. increase. Curiously enough, although the maintenance-of-way and structures group showed the smallest increase of any over the year (3·04 per cent.), it showed the largest gain (7·39 per cent.) over the single month from May to June of this year.

Baltimore & Ohio Locomotives

Locomotives of the Baltimore & Ohio Railroad are now being painted blue, lined out in gold and red, instead of dark green. Clearer numerals and lettering on the cab and tender sides are being used, and the names carried on the cabsides of express-passenger locomotives are being removed. Where names have been used to distinguish locomotives, in the case of the "President" Pacific series of the "P.7" Class, the class number only will be used in future for official purposes.

Rebuilt "Colonial" Dining Cars

Between 1923 and 1930 the Baltimore & Ohio Railroad built 20 dining cars of a distinctive design, and furnished the interiors in a way suggestive of the charm and elegance of colonial days, with Adam ceilings, colonial pewter sidewall light-brackets, cut-glass ceiling globes, Hepplewhite chairs, and Sheraton sideboards. The construction of the vehicles was well up to modern standards, and made use of all-steel bodies and 6-wheel bogies; later, air conditioning was installed. Due to the difficulty of obtaining period replacements, during a recent general overhaul, the Car Department modernised three of the vehicles; streamline exteriors and rounded roofs were substituted for the clerestory bodies, and the interiors were modernised in such a way as both to increase their attraction and to reduce maintenance costs. The seating capacity of each vehicle has been increased from 36 to 48; continuous strip-lighting has replaced the previous fixtures; and brighter colour schemes, including those of the carpets and curtains, have been adopted. The "Colonial" cars are named after various women prominent in early American history, such as Martha Washington, Betsy Ross, and others. A start has been made with similar work on dining cars such as those in service on the Royal Blue, National Limited, and Columbian streamline trains; further vehicles will be dealt with as they come into the shops.

Travelling Carriage-Cleaners

In normal conditions, internal cleaning of American coaching stock is carried out in the yards in which the trains are stored and marshalled; but the present intensive use of stock is such that, on many coach rosters, turn-round margins at terminals do not allow adequate time for this work. The Pennsylvania Railroad therefore has appointed a smartly-uniformed team of women travelling-cleaners, armed with short brooms, dustpans, rubbish bags, and dusting cloths, who travel to and fro between selected points, cleaning and tidying the cars throughout each train, and in this way each servicing a number of trains daily. This practice was a regular feature in peacetime in some European countries, and has been tried to a limited extent in Great Britain.

ARGENTINA

Professional Meetings

A meeting of the River Plate Branch of the Institution of Mechanical Engineers was held in Buenos Aires on August 11, when two papers dealing, respectively, with "The Measurement of Temperatures" and "The Measurement of Fluids" were read by Messrs. C. G. Tisdall and B. S. Stevenson. Both papers were illustrated by graphs, lantern slides, and models of the various instruments described. In the unavoidable absence of the Chairman of the Branch, Mr. P. J. Dawes, Major O. Steven, M.C., presided; after the reading of the papers there was a discussion.

ITALY

Increases in Traffic

The number of passengers conveyed in the fiscal year ended June 30, 1942, over the Italian State Railways exceeded by 27·9 per cent. the total in 1940-41; and the total of passenger-km. was 28 per cent. higher. The tonnage of goods conveyed over the State Railways was 3·59 per cent. more than in 1940-41; the number of *tonne*-km. increased by 19·9 per cent.

A comparison between the last full pre-war year (that ended June 30, 1939) and the year ended June 30, 1942, shows the following increases for the State Railways: passengers carried, 70½ per cent.; passenger-km., 86·3 per cent.; goods tonnage, 33·7 per cent.; and *tonne*-km., 98·4 per cent.

Railway Route Mileage

The total route length of privately-owned railways in Italy was approximately 5,935 km. (3,688 miles) on June 30, 1942. Narrow-gauge lines aggregated a route length of about 3,775 km. (2,346 miles), of which the State Railways accounted for some 595 km. (370 miles).

SWITZERLAND

Double Track on Gotthard Route

Some details of the dates at which doubling has taken place on the Gotthard route are given in the *Bulletin of the Swiss Federal Railways*. The main Gotthard route between Immensee and Luino was opened throughout as a single line on June 1, 1882, but in the following year double track was in use through the great tunnel between Göschenen and Airolo. Nothing further was done for seven years, but after that period doubling was effected as follows:—

1890-96	...	Airolo—Giubasco
1892-93	...	Erstfeld—Göschenen
1896	...	Erstfeld—Flüelen
1904	...	Immensee—Brünnen
1912-15	...	Maroggia—Chiasso
1912-15	...	Lugano-Melide
1922	...	Giubasco—Al Sasso
1934	...	Al Sasso—Rivera
1942	...	Taverne—Lugano
1943	...	Sisikon—Flüelen

The sections Brunnen-Sisikon, Rivera-Taverne, and Melide-Maroggia, a total of about 10 miles, remain to be doubled.

Whereas on the principal sections of the route provision had been made, of varying kind, to facilitate eventual doubling, between Brünnen and Flüelen this was not the case. Lack of sufficient documents made the work of the engineers much more difficult than it need have been. The heavy engineering works and consequent high cost required for the doubling of this section were reasons why practically no consideration was given to it until 1919. Even then effect was not given to the plans for some time. Indeed, not till 1934 was the matter seriously resumed.

SWEDEN

Bergslagen Railways Results

The report for 1942 of Bergslagernas Järnvägs Aktiebolaget, which owns and operates the most important private railway system in Sweden, shows gross receipts of kr. 8,990,000, compared with kr. 8,500,000 for 1941. The former figure includes kr. 6,170,000 in respect of the company's share in the profit of the Göteborg-Dalarne-Gävle group of private railways, which are operated as one with the Bergslagernas Järnvägar. After providing kr. 1,680,000 for debt service; kr. 870,000 for general expenditure, pensions, and social welfare; kr. 1,350,000 for taxation, and after allocating kr. 2,730,000 to renewal fund, there was a net profit of kr. 2,360,000, against kr. 2,320,000 for 1941. A dividend of 5 per cent. (same) was paid absorbing kr. 1,260,000. A sum of kr. 1,000,000 was allocated to disposal fund; kr. 280,000 to investment reserve; and an additional kr. 400,000 to renewal fund; and kr. 1,340,000 was carried forward.

The Bergslagernas Järnvägar handles a heavy iron-ore traffic originating in the mining area around Falun, in central Sweden.

London & Birmingham Railway Hotel & Dormitories

Some details of the origin of the present L.M.S.R. Euston Hotel

IN an editorial article on "Railway Hotels and the Transport Industry," which appeared in our September 10 issue, it was pointed out that from the opening of the Euston Dormitories (now Euston Hotel), to Queens Hotel in Leeds in 1937, railways have been a major factor in the hotel business both for resorts and business purposes. The Euston Hotel was a pioneer in the railway-owned hotel business, and we are indebted to Sir William Wood for a copy of the prospectus which was issued in April, 1838, from which we have abstracted some details relating to the original building.

This prospectus was issued by the board of the London & Birmingham Railway, and it was sent to each proprietor of that company, offering shares at the nominal value of £25 in the new company to be called London & Birmingham Railway Hotel & Dormitories. No indication of the amount of capital required to be raised in the new company was given in the prospectus which, however, contained an illustration and plan of the proposed hotel and dormitories (reproduced herewith).

The prospectus stated that for the accommodation of passengers by the railway, it was proposed that an hotel and dormitories should be established on an extensive and unappropriated piece of the company's ground, in front of Euston Station, leaving sufficient space for a handsome approach to the principal entrance. The hotel was to be erected on the east side, and the dormitories on the west. It was also intended that the directors of the London & Birmingham Railway Company for the time being should be trustees of the land, at a nominal rent, and have power to form a company with the requisite capital, to be raised by shares of £25 each. The trustees were to have entire control of the buildings and "to agree with one or two respectable tenants for the occupation, at rents calculated to afford ample remuneration to the shareholders for their outlay."

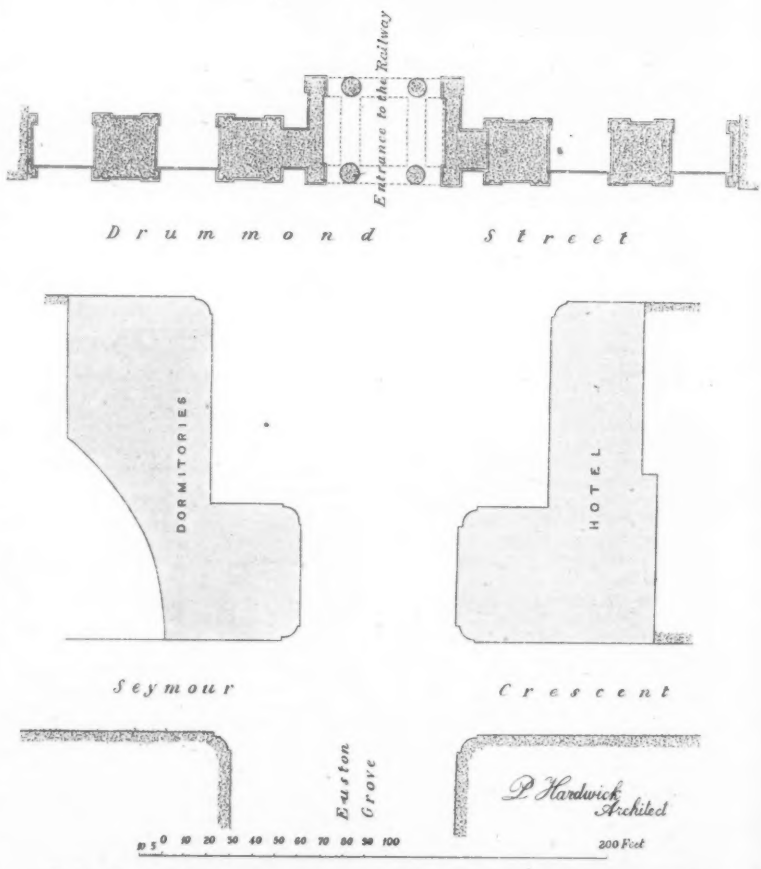
The building on the east was to be arranged for all the purposes of an hotel, with a spacious coffee room for the accommodation of the inmates of it and of the persons in the dormitories who might be desirous of availing themselves of the hotel coffee room. The building on the west to be arranged for dormitories, and "divided into as many rooms of convenient dimensions as the allotted space would admit of." A proportion of the number of rooms was to have small sitting or dressing-rooms attached to them, so that passengers might be accommodated on their arrival with a sleeping room, and, if required, a sitting room; each apartment was to be charged at a price varying according to the floor and scale of accommodation. A coffee room was also to be established in the same building for breakfast and refreshments, but the house was not to be licensed for wine and spirits. The dormitories were to be altogether a separate establishment from the hotel. Baths in "convenient situations" were to be erected in both buildings.

It was further proposed that a space of ground near these establishments should be appropriated to a mews for the convenience of persons requiring post horses, and for the standing of horses and carriages at livery.

The charges of every description, including attendance in the hotel, dormitories, and mews, were to be regulated according to a scale which every person would have the opportunity of inspecting.

Construction was begun in the autumn of 1838, and completed in about a year. The hotel on the eastern side was named the Euston, and that on the west the Victoria. In July, 1881, they were joined by a large new central block, with the road passing through an archway in it, as is the case today. Thenceforward, the whole building was known as the Euston Hotel.

(*See editorial note, page* 450)



Reduced reproductions of original illustrations in hotel prospectus of April, 1838

Post-War Improvements in Goods Wagons

Suggested means for facilitating the faster running of freight trains

(*From a correspondent*)

ONE of the most important pieces of work remaining to be done in this country, in connection with the improvement of rolling stock for freight traffic, is the tackling of the problem of continuous brakes. It is practically certain that the matter would have had to come up for serious consideration sooner or later, for it must be remembered that throughout most of the 1930's we witnessed the most important general speeding-up of train operation in the whole of the present century. Nor were these remarkable results secured without the expenditure of a notable effort and a great deal of ingenuity by the staffs concerned. Track occupation became a burning question.

Signalling installations, especially those in the areas of great towns and railway junctions, had to be redesigned and new equipment installed; modifications were made largely to facilitate the operation of much longer trains at much higher speeds. The track was improved; attention was given to the provision of passing places for the slower trains, and the design of the facing points for such loops.

Throughout all this bustle and development, the ordinary British goods train has plodded on practically unchanged. Three-link chains are the rule for couplings; continuous brakes are confined to express freight traffic. For the latter, a much larger number of vehicles has to be provided with continuous brakes than can ever be actually engaged on express freight workings, and the surplus (which carry the brake gear in case they *may* be required for express work) are used indiscriminately on the ordinary unbraked train, where the brake gear can do nothing to justify its existence or its capital cost and is a mere encumbrance, adding to the dead weight of the train.

Theoretically, it sometimes happens that a number of vehicles, with continuous brakes, or with pipes only, can be placed next to the locomotive so that the front part of the train is braked continuously. We believe this to be at the very best a poor solution to the problem, and only to be considered as a makeshift. Very careful handling of the train is called for, and accidents have occurred through the injudicious use of the brake, followed by the unbraked vehicles surging forward into the braked portion, before the guard has had time to apply his hand brake to the last vehicle. At the worst, this "partial braking" becomes a mere farce; for there are numbers of instances in which the practice could be adopted, but no attempt is made to do so. The sight of a freight train in which the first fifteen or twenty vehicles have continuous brakes, with the pipes coupled between them, yet with the pipe to the engine left *uncoupled*, is by no means rare.

The provision of continuous brakes is naturally closely related to that of the provision of a standard coupling; in any case the three-link chain would have to go. Upholders of the present system will no doubt argue that loose couplings enable the locomotive to "pick up" gradually a train which it would be unable to move, were screw or automatic couplings employed. In other words, a comparatively small engine now handles very heavy trains, and our large engines much bigger trains, than would be possible with continuous brakes. However, there are other considerations, such as track occupation, which will eventually override any such arguments. For all its alleged economy in locomotive power, the loose-coupled train is a great sinner because of the slowness and caution with which shunting must be done, to avoid damage to couplings and to the wagons.

A last point, which really concerns all railway rolling stock, is the need for a different method of braking than on the tread of the wheel. Some kind of brake drum might be made to give better results than the present method, which tends to pick the wheels up off the track and inevitably leads to rough riding. It would be a great advance if, when the big problem of fitting continuous brakes to freight vehicles is eventually faced, we could at the same time be ready with an alternative to the existing method of braking.

(*See editorial article, page* 453)

Secondary Air in Locomotive Fireboxes

Some considerations in attempting to improve combustion of fuel

THE efficient combustion of the fuel is one of the primary aims of the locomotive designer in deciding the type and proportions of boiler and firebox for any particular class of engine. Unfortunately even the nearest approach to complete combustion is often far from satisfactory, because the variables affecting the oxidation process are so numerous and so difficult to control.

The nature of the fuel itself, the rate and manner of firing, the ratio of the air openings between firebars to the total grate area, and the actual design of firebox and boiler tubes, all influence the final result in different degrees.

An important cause of waste, which is not always as easy to detect as might be imagined, is the ejection of unburnt or partially burnt particles of coal from the chimney. Obviously a black smoky cloud shot out by the exhaust steam is a rough indication, if it is continued for more than a few minutes. There is literally more in this form of waste than meets the eye. When a shovelful of coal is fired, the larger lumps will naturally drop on to the grate, but much of the finer matter will be drawn by the flow of gases through the firebox and tubes, and though they may ignite while on their way through the tubes, their energy-release will be too late to add usefully to the heat developed in the boiler. In this connection it should be remembered that a certain time interval, albeit small, is essential for the combustion of even quite small particles of fuel, for the process itself involves the bringing of the particles to the temperature of ignition, the vaporisation of the moisture content, and the distillation—and subsequent burning—of the volatile hydrocarbons before the combustion of the carbon content can begin.

A convenient method of admitting and controlling oxygen passing into the firebox, in such a manner that a reasonable approach to complete combustion can be secured at all times, has long been sought by locomotive engineers. It is not too much to suppose that the greater part of the unburnt fuel or carbon escaping from the chimney could be made to yield its heat if a suitable proportion of oxygen in the form of secondary air could be introduced above the burning fuel on the firebars. At present, secondary air is normally admitted through the firedoor, and consequently suffers from lack of adjustment of the rate of admission.

Many attempts have been made to secure the desired result; the classic example—though we are by no means sure it was the earliest—was that introduced in 1855 by the celebrated D. K. Clark in his locomotive designs for the Great North of Scotland Railway.* Æsthetic rather than practical gains from smoke prevention were probably the motive behind this invention, for it must be remembered that the emission of smoke from locomotives was much more seriously regarded in those days than it is now. The device comprised sixteen holes in the firebox, communicating with the outer air, about a foot above the firebars, eight in a row at the front and eight at the back. Each hole was provided with a steam nozzle which was designed to induce an inward flow of air. The internal diameter was about 2 in., and the tubes through which the air was conveyed were screwed into both inner and outer fireboxes, like hollow stays. The apparatus does not seem to have been adopted by any other railway, though it was a feature of "Great North" practice for many years, so it cannot be considered as unsuccessful. In the middle eighties, James Manson modified the design and enlarged the holes to 3 in. diameter.*

On the London & North Western Railway, John Ramsbottom fitted two circular doors, controlled from the footplate, in front of the firebox; these controlled the admission of air under the brick arch. These were abandoned by F. W. Webb.

In later times, and in other countries, blowers forcing preheated air above the firebed level have been the subject of experiment; and "thimbles" forming air inlets have been fitted along the sides of the firebox, but no device of outstanding supremacy seems to have materialised. Tests in the U.S.A. have shown that with a rate of firing of 185 lb. per sq. ft. of grate, the thickness of the fuel bed varying from 6 to 12 in., the whole of the air supplied through the firebars was used up at a level about 4 in. above the grate. Kreisinger has shown† that the ratio

$$\frac{\text{Weight of air supplied}}{\text{Weight of fuel gasified}}$$

stays practically unchanged; the value is about 7/1. In other words, less than half of the amount of air theoretically needed to bring about complete combustion—about 15 lb. per lb. fuel—is likely to arrive through the fuel bed. The rest of the air required should therefore be introduced *above* the level of the fuel bed to ensure that the combustion of the fuel is completed.

* "Locomotive Engineering and the Mechanism of Railways," by Z. Colburn (T. Collins, London, 1871) vol. 2, Plate XLII

* "History of the Great North of Scotland Railway," by Sir Malcolm Barclay-Harvey (Locomotive-Publishing Co., London, 1940) p. 194

† U.S. Bureau of Mines Bulletin No. 135, "Combustion of Coal and Design of Furnaces"

An Efficient Junction Renewal

Expeditious relaying of a complicated point and crossing on the L.M.S.R. in Scotland

DUE to ordinary wear and tear, it became necessary to renew the connections between the station dock lines and sidings and branch A up and down lines, as well as the diamond crossings from the dock lines and sidings which link up with branch B, at a certain junction on the L.M.S.R. in Scotland. A site diagram is reproduced to illustrate the position of the work. Altogether 685 yd. of track had to be dealt with, including 8 obtuse crossings, 13 new acute crossings, 3 sets of double slips, 3 sets of type "B" switches, and one set of catch points. The double-line Branch B as it approaches the station first cuts across the up and down main lines by 4 plain diamond crossings, which were not part of this renewal programme. Next, the branch B crosses the double line branch A, and continues in a trailing direction past a shunting head line on its way to the dock platforms.

The old layout consisted of 1 in 10 acute and obtuse angle crossings throughout, giving a straight run into the platforms. In order to conform to Ministry of Transport standard regulations, the new obtuse crossings had to be of an angle of 1 in 8, and this sharper angle necessitated a considerable slue of branch B at the signal box, and precluded the possibility of splitting the work into two or more separate operations. The old material consisted of 90-lb. obtuse crossings laid in 1920-22, and the acute crossings of the diamonds were of 95-lb. material laid in 1929. New 95-lb. R.B.S. materials were used throughout in the new design, which was based on the standard permanent way equipment drawings. The new design simplified the layout in that a single slip diamond at the station end was replaced by two single connections, this being possible because of the shorter length occupied by the 1 in 8 obtuse crossings.

A complete assembly drawing of the layout was prepared, upon which were shown the positions of all rail joints and timbers; these, together with the crossings, were numbered and lettered. The layout drawing was sent to the divisional permanent way workshops, and the new material (apart from timbering) was assembled there, and inspected on a certain day.

A site for the temporary layout was prepared and levelled in the goods yard, about ¼-mile by rail from the actual site. There the work was set out five days later. On the final site the work was pegged out also, and the Signal Department was informed of the new positions of the switches. This department was thus enabled to proceed with the placing of cranks and timber soleplates, and also the renewal of the point rodding in a better alignment. Channel rodding replaced the old tubular material.

Previous to this, timbers had been delivered at the temporary site, and a start was made to place them in position two days after the setting out of the work. Due to wartime conditions, the usual 31-ft. timbers were replaced by two shorter lengths, butt-jointed, the joints in adjacent timbers being staggered. All timbers were in position ten days later.

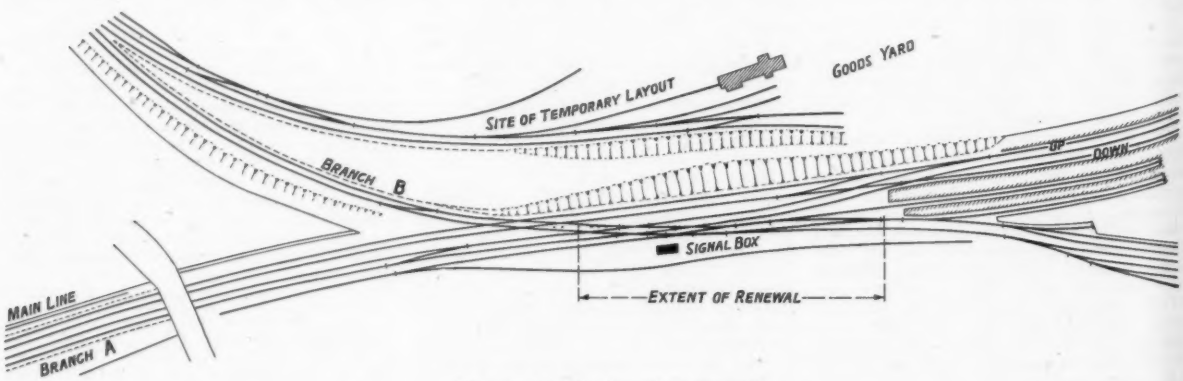
By the use of a 6/7½-ton steam crane, the unloading and placing of the steel and iron work was begun on the next day and completed in a week, and in this period also the Signal Department had begun to fix locks, lock-bars, and other fittings. The whole of the drilling of timbers and screwing in the layout was done by means of a petrol-electric unit driving boring and screwing machines.

Two straight white lines were set out on the timbers of the work, both parallel to the original survey base line on the actual site. This facilitated the lining up of the timbers on the ground during the relaying operation. In order to locate the timbers at the proper spacing, laths were placed along the timber ends, and both timbers and laths were marked and numbered to correspond with the nomenclature on the drawing. Painters were employed for two days marking the timber and rails.

For the transfer of the layout to the permanent site in readiness for the relaying operation on the selected Sunday, the materials were disconnected, as far as possible in sections complete with timbers and signal fittings. Thus, for example, the slip diamonds were loaded into wagons in three sections.

Access to the goods yard being from branch B, which is closed on Sundays, the materials were all removed from the yard before the Sunday of the relaying. The unit sections were loaded into wagons, and taken to the workshop sidings at the far end of the station, the acute crossings, together with their timbers, being strung out opposite their permanent positions on the site.

The relaying operations began on the Saturday night, when the signal fitters



Site plan of the junction renewal

Oxy-acetylene rail cutter at work

The new layout through the slip diamonds

Old slip diamonds before renewal

Part of the assembled new layout ready for sectioning, loading, and removal to site

Section of new slip diamonds being lowered into position, showing signal fittings already mounted

General view of old alignment looking towards branch B

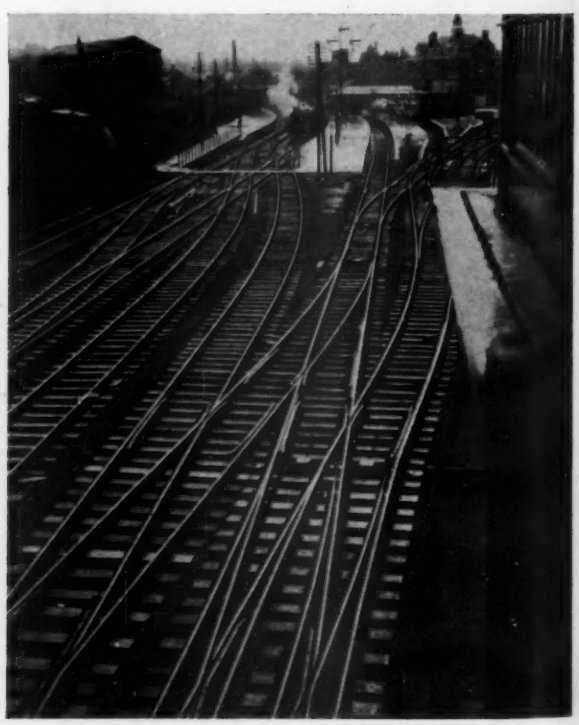
General view of new alignment looking towards branch B

disconnected the signal connections, and the first portion of permanent way was removed by crane at 3.5 a.m. on Sunday. By 10.30 a.m. all the old materials had been removed, and at 11 a.m. the formation had been levelled throughout, and the placing of the new crossing timbers was begun. The whole of the new permanent way was linked up by 9.30 p.m., and the signal fitters completed their work at 10.45 p.m. Traffic on the up main line was not interfered with, and arrangements were made to let down main-line traffic pass, this line being affected only to a slight extent. Full possession was, of course, obtained of the other lines. During darkness shaded Tilley paraffin vapour lamps were used.

The removal of the screws in the old work was assisted by the use of the screwing machines, and oxy-acetylene burning plant dealt with obstinate bolts, such as those holding down the crossing point rails. An oxy-acetylene rail cutter was used for those rail closures which had to be cut on the ground, and the average time taken per cut was 90 seconds. In boring the "blind ends" of the closures, a portable petrol drilling machine was used. The speed of working of the latter was two minutes per hole.

The progress of the work is illustrated in our photographic reproductions, for which we are indebted to Mr. A. H. McMurdo, Divisional Engineer, Scotland, L.M.S.R., to whose designs and supervision the work was carried out by Mr. C. Marsden, District Engineer, Irvine.

Old alignment at station end



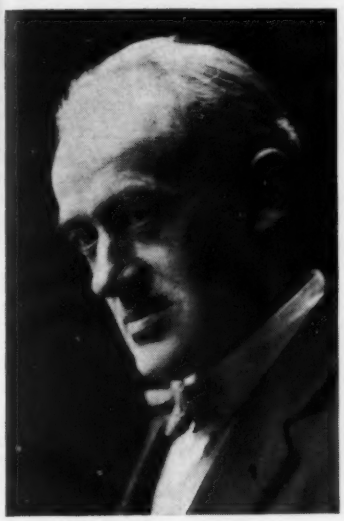
The complete new layout at station end

RAILWAY NEWS SECTION

PERSONAL

Mr. Richard F. Summers, Chairman of John Summers & Sons Ltd., and a Director of the United Steel Cos. Ltd., has been appointed a Director of the London Midland & Scottish Railway Company.

Mr. David Dobbie, M.I.Loco.E., who, as recorded in our October 15 issue, is retiring from the position of District Locomotive Superintendent, Polmadie, L.M.S.R., was educated at Stanwix School, Carlisle, and the Royal Technical College, Glasgow. In 1897 he commenced an engineering apprenticeship with Cowans, Sheldon & Co. Ltd., St. Nicholas Works, Carlisle, and in 1903 he entered the service of the former Caledonian Railway at Stirling. Later he was transferred to St. Rollox Works, where he was engaged on the construction and repair of locomotives, and was for six years draughtsman on the design of locomotives and carriages. In 1910 he became Test Inspector of Material, and for eight years from 1912 was attached to the Running Office as Assistant, in which capacity he was responsible for carrying out all coal, oil, and mechanical tests during that period; among his other duties was that of testing enginemen in their mechanical proficiency and knowledge of rules and regulations. He then was appointed Works Manager at Perth, and after the amalgamation was transferred to the works of the former Highland Railway at Inverness, where he was in charge of the C.M.E. Workshops and Outdoor Machinery Services. For a period he served at the Kilmarnock Works of the former Glasgow & South Western Railway, and in 1930 was appointed Assistant Works Superintendent at the C.M.E. Workshops, St. Rollox. Five years later he was appointed Locomotive Superintendent for the Polmadie District, embracing Hamilton, Greenock, and Princes Pier. Mr. Dobbie was Chairman for two sessions of the Scottish Branch of the Institution of Locomotive Engineers, and has read papers before the Institution.



Mr. David Dobbie

District Locomotive Superintendent, Polmadie, L.M.S.R., 1935-43

Mr. William Edward Carr Lazenby, A.M.Inst.T., Assistant Chief Officer for Labour & Establishment, L.M.S.R., who retired from the company's service on October 30, entered the service of the former Midland Railway in 1899 in the General Manager's Office, and received training and experience also in the Traffic and Goods Departments, particularly in staff problems. He became Chief Clerk, Industrial Questions Office, General Manager's Department, in 1920, and was appointed Staff Assistant, General Manager's Department, in 1922. On the grouping in 1923, he was made Staff Assistant to Assistant to General Manager, Euston, for staff and labour matters. When a Chief Officer for Labour & Establishment was appointed by the company in 1927, he was made Assistant to that officer; and in 1931 he was appointed Assistant Chief Officer for Labour & Establishment. Other positions which Mr. Lazenby held were Secretary, Midland Railway Sectional Councils; Chairman, Railways Staff Conference Committee from 1923; Chairman, R.E.C. Staff Committee Sub-Committee; advocate for the main-line railways at the Railway National Wages Board & Industrial Court from 1928; member of National Railway Shopmen's Council, National Railway Electrical Council, and all L.M.S.R. sectional councils; representative of the main-line railways on the Chapter-General, and on the Council, of the Venerable Order of St. John of Jerusalem, of which Order he was made a Knight of Grace by the King in 1941; representative of his company on the Ambulance Committee, and on the Ambulance Sub-Committee, of the St. John Ambulance Association; Chairman, L.M.S.R. Ambulance Delegates Conference; one of the appointed representatives of the Railway Companies' Association to the British Employers' Confederation; L.M.S.R. representative on the Council of the British Association for Commercial & Industrial Education; A.R.P. Controller, L.M.S.R. Headquarters, Watford; and Chairman, L.M.S.R. Operatic Society.

Mr. W. E. C. Lazenby

Assistant Chief Officer for Labour & Establishment, L.M.S.R., 1931-43

Mr. S. T. Clayton, District Locomotive Superintendent, Rugby, L.M.S.R., who, as recorded in our October 15 issue, has been appointed District Locomotive Superintendent, Polmadie, received his technical training at the Horwich Works of the former Lancashire & Yorkshire Railway, and at the Horwich Technical Institute. In 1917 he was appointed Foreman Fitter at Low Moor locomotive shed, and became Locomotive Shed Foreman at Sowerby Bridge in 1919, and Running Shed Foreman at Lower Darwen in 1920. He was appointed Assistant District Locomotive Superintendent at Carlisle (Midland Division, L.M.S.R.) in 1928. While in that post he acted, from April to December, 1934, as Chairman of the Locomotive Operations Analysis Committee, Midland & Central Divisions. In 1935 he was transferred to Manchester as Assistant (Engine Utilisation & Accommodation) in the office of the Divisional Superintendent of Operation. He was appointed Assistant (Locomotive Maintenance Section) in the office of the Divisional Superintendent of Operation at Derby in 1937. In 1938 Mr. Clayton became District Locomotive Superintendent, Bank Hall, and in May, 1940, he was appointed District Locomotive Superintendent, Rugby.

Mr. S. T. Clayton

Appointed District Locomotive Superintendent, Polmadie, L.M.S.R.

Mr. Frank Probert, A.M.Inst.T., Assistant District Superintendent, Lincoln, L.N.E.R., who, as recorded in our October 15 issue, has been appointed District Superintendent, Lincoln, entered the service of the former Great Central Railway in 1905 as a junior clerk in the Chief Goods Manager's Office, London. Three years later he passed the company's higher-grade examinations, in the first of which he took second place and thus qualified for a four-years' course of training in the work of the principal departments. In February, 1914, he was appointed Assistant Rolling Stock Controller, and during the war served in France with the Royal Engineers (R.O.D.), and was mentioned in dispatches. On returning to the position of Assistant Rolling Stock Controller, Mr. Probert served on the R.C.H. Common User Committee, and

Mr. Frank Probert

Appointed District Superintendent, Lincoln, L.N.E.R.

took an active part in the preparation of the all-line scheme for the control and distribution of freight rolling-stock on the L.N.E.R., on the amalgamation. Afterwards he was attached to the Superintendent, Southern Area, for special duties, and in 1924 was appointed Chief Clerk in the District Superintendent's Office, Marylebone. A year later he was appointed Assistant District Superintendent at Grimsby, and in 1926, when the district was extended, was transferred to Lincoln. Mr. Probert is a foundation Associate Member of the Institute of Transport.

THE LATE MR. HENRY FORBES

We regret to record the death, on November 2, of Mr. Henry Forbes, Secretary and Manager, County Donegal Railways Joint Committee. Mr. Forbes, who joined the staff of the Great Northern Railw y (Ireland) in 1888, was appointed Secretary and Traffic Superintendent, County Donegal Railways Joint Committee in 1910.

Sir William Wood, President, L.M.S.R., writes:—

I have heard with very deep regret of the death of Henry Forbes, who for the last 33 years has managed the County Donegal Railways. I last saw him some 6 weeks ago as active as ever at his work in Donegal on the railway which owed so much to his initiative and resource, and all who knew him will deeply regret his loss, but will know that to die in harness was what he would have wished.

The 124 miles of 3 ft. gauge railway which he managed in difficult circumstances had a unique history, even for an Irish narrow-gauge railway, and from being operated by steam locomotives has been converted gradually for $\frac{3}{4}$ of its train-miles to oil and petrol operation. A description of the various devices Forbes employed in this transfer would make interesting and amusing reading. I well remember his early experiments with the engine of a second-hand Ford car and the pride with which he displayed his first car with a diesel engine and his explanation that he had the exhaust turned on the track in order to kill the weeds and save maintenance!

At Killybegs he built, with portions of an old crane, a complete turntable for his car, and with the recent development of his export traffic from Donegal of turf, he converted some old carriages into trucks for the purpose.

The results of his labours can well be seen in the fact that not only did he succeed in keeping all the line open despite the effects of the 1914-19 war with its reaction on prices, but year by year he nursed it round to a remarkable degree of prosperity in the circumstances of Donegal and turned an operating loss into a net receipt of £16,000, equal to 25 per cent. of the gross receipts.

He was a unique railwayman, with vision and a great fund of humour, and though he lived for his work, he also had a great fund of knowledge outside it, from Celtic mythology and Irish history to the Spanish Armada, the French Revolution, the Napoleonic Wars, and the flora and fauna of his beloved county of adoption.

An unforgettable and lovable character.

The Council of the Institution of Civil Engineers has awarded a Webb Prize to Mr. A. E. Tattersall, Assistant Chief Engineer (Signals), L.N.E.R., for his paper, read before the Institution on November 17, 1942, on "Railway Signalling and Communications."

We regret to record the death on October 25, in his 79th year, of Mr. John Albert Hill, of the Metropolitan-Cammell Carriage & Wagon Co. Ltd., after nearly 66 years' service. Mr. Hill started his career in 1877 with the Oldbury Railway Carriage & Wagon Co. Ltd.; and, soon after the amalgamation in 1902 of the Metropolitan, Ashbury, Oldbury, and Lancaster Railway Carriage & Wagon Companies and Brown Marshall's & Company, he was appointed Buyer of the new Metropolitan combine. For many years now, however, Mr. Hill had been head of the Shipping Department, and had become well known in the shipping and transport world. On the completion of his 60th year of service, the company made him a presentation as a mark of its esteem.

G.W.R. APPOINTMENTS

The Great Western Railway announces the following appointments:—

Mr. W. M. Hitchcock, Assistant District Goods Manager, London, to be District Goods Manager, Liverpool, *vice* Mr. A. E. le Cheminant, who, by agreement with the Minister of War Transport, has been appointed Railway Liaison Officer at Birkenhead (from October 18).

Mr. H. D. Poole, Chief General Clerk, Chief Goods Manager's Office (Rates), Paddington, to be Assistant (Rates Department), Chief Goods Manager's Office, Paddington (from November 1).

Mr. G. M. Smith, Chief Clerk, District Goods Manager's Office, Newport, to be Assistant to Mineral Traffic Manager, Chief Goods Manager's Office, Paddington (from November 1).

Mr. C. Bullock, Clerk-in-Charge, Chief Goods Manager's Office (Salvage), Paddington, to be Assistant Claims & Salvage Agent, Chief Goods Manager's Office, Paddington (from November 1).

Mr. W. Lampitt, Outdoor Representative, Chief Goods Manager's Office (Working), Paddington, to be Assistant District Goods Manager, London (from October 18).

Mr. L. F. B. James, Outdoor Representative, Chief Docks Manager's Office, Cardiff, to be Assistant Dock Manager, Barry Docks (from October 11).

Mr. R. B. Temple

Appointed District Goods & Passenger Manager, Lincoln, L.N.E.R.

Mr. R. B. Temple, M.Inst.T., Acting District Goods Manager, Leeds, L.N.E.R., who, as recorded in our October 15 issue, has been appointed District Goods & Passenger Manager, Lincoln, joined the clerical staff of the Passenger Department of the former North Eastern Railway at Kirbymoorside in 1911. Subsequently he served at a number of stations on both Goods and Passenger Department work, and as relief clerk; during the war of 1914-19 he saw service with the King's Royal Rifle Corps. In 1920 he was appointed to the staff of Sir Alexander Butterworth in the General Manager's Office; and after the amalgamation he continued to be at headquarters at York, in the Divisional General Manager's Office, until the end of 1927. He then was appointed Stationmaster at Pickering, and from February to November, 1931, held a similar position at Hatfield. In the latter month he became Stationmaster, Southend. In 1933 he took charge of the then newly-formed Goods Development Section in the Goods Manager's Office, York, in which post he undertook commercial research and development work, together with the administration of the North Eastern Area Goods Department canvassing organisation. In March, 1939, he was made Assistant District Goods Manager, Leeds, and in September of that year became Acting District Goods Manager there, in the absence of Colonel W. E. Blakey on military service. (This post covers portions of both the Southern and the North Eastern Areas). While at Leeds, Mr. Temple served as Railway Liaison Officer to the Regional Transport Commissioner, as a member of the Yorkshire Road/Rail Conference, and as railway representative on the North Eastern Regional Canal Conference. Mr. Temple is interested in staff training and initiated the first L.N.E.R. training centre for station clerical staff, at Scarborough, in 1942.

Captain John C. Kubale, who is now in the Royal Engineers, was among those made a Member of the Order of the British Empire (Military) in the recent awards for distinguished service in the Middle East. In civil life Mr. Kubale is Development Engineer of Metropolitan-Vickers-GRS Limited, and is well known in the railway world as an expert on mechanised hump yards.

TRANSPORT SERVICES AND THE WAR—214

G.W.R. Special Trains

Since war began, the G.W.R. has run 55,000 special trains for Government personnel and stores.

Staggered Hours in London

In the Greater London area there are now 51 local transport groups—four more than last winter—responsible for staggering hours of work affecting the daily traffic movements of more than 500,000 workers. We refer to this in an editorial note, page 450.

London Bus Shelters and Stop Posts

Since last winter, 267 more roadside shelters have been installed along the Central Area and Country bus routes of the London Passenger Transport Board; in addition, a further 150 are to be erected in the near future.

The replanning of about 10,000 stopping places on 1,586 miles of bus, tram, and trolleybus routes is practically finished. This winter there will be uniform scheme of stopping places in all districts. To reduce congestion on the pavement, a large number of "split stops" is being arranged. Where now several routes stop at one post, they will be divided between two or more posts, if space allows.

Provincial Buses as Ambulances

At Exeter, 14 buses of the Western National Omnibus Co. Ltd. (an associate of the G.W.R. and one of the Tilling group of companies) have been turned into ambulances for use in emergency. At first they were fitted for 10 stretchers, but it has now been found possible, in order to make the best use of the vehicles and drivers available, to take 14, with a seat for the nurse attendant and the special box holding medical equipment. At a push, in fact, 3 more stretchers could be taken in, making a total complement of 17. Equipment is now ready to convert a further 15 buses at short notice, should the necessity arise, bringing the fleet of ambulances up to 29. "Although the coach bodies were on rather old chassis," Mr. Eric F. Horobin, the Traffic Manager, has stated, "there is no doubt that for utility purposes they are ideal. I have been told by those who have to work with them that our ambulance buses are most convenient to load and unload; more so, in fact, than many other converted vehicles."

Improved S.R. Train Lighting

As we recorded briefly last week (page 441), the Southern Railway has provided some 25,000 shades and 18,000 electric lamp bulbs to improve blackout travel. The changeover, which is now complete, has necessitated modification to the fittings or wiring of more than 4,000 carriages. The main alteration has been on the inner suburban electric trains, which now have two white lights instead of one blue and one white light. Outer suburban electric trains continue to have one blue and one white light, as these trains run into the coastal area where blue lights only are at all times obligatory. The concession made last February that the white lights will not be extinguished at stations still holds good. The lighting arrangements on main-line steam and electric corridor trains remain unaltered.

During an air-raid Alert, blue lights only will continue to be the rule on all trains except the inner-suburban electrics, which will then have no light at all. These improvements are dependent for their continuance on passengers co-operating by keeping blinds down. One window uncovered means that all white lights in the whole train must be extinguished by the guard. Considerable thefts of railway electric light bulbs have been experienced; apart from the question of dishonesty, the bulbs are useless for domestic lighting.

Lifts in South Africa

Extra petrol is to be granted to South African motorists who give lifts. Arrangements have been made for pedestrians to purchase books of 3d. tickets, and to surrender one ticket to the motorist for each lift; 40 tickets secure the motorist petrol for 50 miles. The 3d. goes to any war charity nominated by the motorist.

German Postal Vans in Sweden

After the termination of the German transit traffic through Sweden for Finland and Norway in August last, an agreement was made between Sweden and Germany whereby Germany was granted running powers in respect of German postal vans in transit between Germany, Finland, and Norway. The number is restricted to 28 postal vans a week, and each one is allowed a complement of three to four postal employees clad in mufti. Two armed Swedish policemen are said to accompany each van.

Some of the fleet of Western National buses converted for use as emergency ambulances (See accompanying paragraph)

Norwegian Sabotage

In an effort to deter sabotage by Norwegian patriots, the Germans are arranging for Norwegian hostages to travel on every train likely to be attacked. The intention is that the hostages, chosen from prominent Norwegians, would be shot immediately if there were any incident during the journey. More Norwegian civilians are being used as guards on railway lines and bridges exposed to attack.

The S.N.C.F. Makes the Best of It

Precise information concerning the working of the French railways since the armistice with the Axis has necessarily been difficult to obtain. The armistice placed very heavy restrictions on the use of certain materials by the French National Railways Company (S.N.C.F.), except where work had to be done which the enemy judged would be useful to its own plans, and the position has, of course, become progressively more serious. The old-established *Revue Générale des Chemins de Fer* continues to be published, doubtless under strict German censorship, and details have been allowed to appear in that journal of the steps taken by the French authorities to instruct the staff in measures necessary to insure the most economical use of essential materials, such as lubricants, and to design improved forms of fittings intended to achieve the same object. Reclamation of scrap and building up of worn parts have been adopted energetically, and nothing which will effect a saving is being neglected. Large numbers of German vehicles have to be dealt with, and instructions on the handling of them figure prominently in the programme.

German Potato Transport Control

A German Order issued on September 27, and effective at once, provides that potatoes in small consignments may not be conveyed as express goods, nor as ordinary or accelerated fast goods. It was announced that this measure had been taken in order to relieve the fast goods services of the Reichsbahn.

Standardised German Tank Wagons

An Order recently issued by the Physikalisch-Technische Reichsanstalt (German Physical-Technical Research Station) specifies standard measurements and equipment for German four-axle high-capacity tank wagons. These specifications were published in the *Reich Gazette* No. 184, and apply also to privately-owned tank wagons of the types concerned. High-capacity tank wagons are to bear a special indication that they comply with the required standards.

Increased Hungarian Goods Rates

It may be recalled that increases averaging 50 per cent. were made in the passenger fares of the Hungarian State Railways in April last. Luggage rates were increased by 50 per cent. on July 1. On the latter date, also, goods rates were increased by 25 per cent. and express goods rates by 40 per cent. Import and export rates are also affected, excepting where international through rates are applied. For these, an increase is envisaged for a later date. Certain goods are exempted from the increase, such as milk, firewood, iron ore, and stone for road-building. The rate facilities granted for firewood have recently been extended to June 30, 1944.

German Roads in Russia

Very heavy German censorship would appear to have been imposed upon the transmission abroad of details of a report recently published in Germany on the road communications in and approaching German-occupied Russia which have been established by the Germans. This report outlined the position as it was in July, 1943, and described the condition of the main roads, which are called "Dg" (*Durchgangsstrassen*, or through roads). They are described as providing communications over long distances similar to the roads between Berlin and the Pyrenees. The only details which have reached us, but which a well-informed correspondent says may be regarded as typical, are those relating to road "Dg IV." This is stated to link Lemberg (Lwow) the capital of Galicia, with Stalino, the capital of the industrial

Donetz area, a distance of some 930 miles. "Dg IV" runs *via* Krivoj Rog, the most important iron ore centre in Southern Russia, and crosses the Dnieper at Dniepropetrovsk. The first section in the west was stone-paved for a distance of about 248 miles and had been widened from 3½ metres to 6 metres (11 ft. 5 in. to 19 ft. 8 in.) but the balance consisted of earth roads or tracks crossing Southern Russia as a "loose bundle of irregular ruts" as the report puts it. This earth road was improved by laying a stone platform alongside it. This is used during bad weather; the earth road may be used only when the weather (and thus the road conditions) are favourable.

Although from these brief details this road would appear to be very far from constituting a finished military work, an enormous labour force is said to have been absorbed in its construction. For example, some 250,000 persons are stated to have been working along this road in August, 1942, exclusive of auxiliary labour, of which 80 per cent. consisted of female workers (aggregating 100,000 women). Every description of working method, from the use of the most up-to-date road-making plant down to primitive hand labour was employed. Mechanised transport was reinforced by haulage by some 25,000 "panje" horses. The name "panje horse" is that given by the Germans to the small horses generally used on farms in Poland and Southern Russia; its haulage value is slight. The "panje cart" is a type of small country vehicle used by the farmers in these regions. The German Todt Labour Organisation is said to have assembled and used a fleet of more than 1,000 "panje carts" in building road "Dg IV."

Reichsbahn Evacuation Traffic

The wholesale transfer of masses of population from danger areas to regions thought to be safer from air attack is a heavy task with which the German Reichsbahn is faced at present. Several methods have been evolved and are being applied according to whether evacuation takes place after or before an air attack. If the population of a town, which has been more or less destroyed, has to be evacuated, train accommodation requirements cannot be assessed easily and precisely, as it is stated that telephone communications are generally cut. In such cases the Reichsbahn sends as many empty train sets as possible to the evacuation stations or halting places and organises a shuttle service to a temporary concentration point, with a view to removing as many persons as possible within the shortest space of time. Only when this is accomplished are the evacuees distributed to the various final reception areas. Thus the evacuation takes place in two stages. To enable the Reichsbahn to apply this method, a large number of train sets has been withdrawn from all parts of Germany and concentrated at points in or near the danger areas. It is admitted that this measure, absorbing a great many carriages, is a handicap to the normal traffic requirements, but it is regarded as necessary in the special circumstances.

Planned evacuation of danger areas in expectation of air attack is effected in a different way. In addition to the special train services and welfare measures provided for by the N.S.V. (Nationalsozialistische Volkswohlfahrt, or Welfare Organisation), the accommodation of normal trains is increased and additional trains are organised for evacuees, but "admission tickets" have had to be introduced for various fast trains in order to avoid excessive overcrowding. The most difficult problem, though, is the luggage traffic. In the early period of the Berlin evacuation, stations were greatly congested with heaps of luggage. In the meantime, emergency luggage reception offices have been established, and the methods of acceptance of luggage have been simplified; moreover the position is said to have been improved by the institution of special fast luggage trains.

War Railway Traffic in America

In the first 18 months of United States participation in the war as a belligerent, from the date of Pearl Harbour, U.S.A. railways moved more than 20 million troops a total distance of 17,105 million passenger miles, including the conveyance of upwards of 7 million recruits to their training centres. Approximately 90,000 troop movement orders have been issued to the railways, and these have called for the use of 214,881 sleeping cars, 72,368 coaches, 49,987 baggage and kitchen cars, and 101,881 box, flat, gondola, and refrigerator wagons. The average size of train required for the movement of 1,000 troops with their equipment has been 29½ passenger and freight vehicles, all bogie stock. In addition to the foregoing, the railways have been called upon to move more than 80 million tons of freight and express traffic for the United States Army.

U.S.A. Winter Resort Trains Banned

This winter the United States Office of Defense Transportation has refused to authorise any additional trains or sleeping cars to handle traffic to and from Florida, the Gulf Coast, Arizona, California, and other winter resort areas. Since the general order freezing passenger train schedules which was issued by the O.D.T. on September 26, 1942, two additional trains between New York and Southern Florida, one by the Atlantic Coast and the other by the Seaboard Air Line route, have been authorised, and a third train between Washington, D.C., and points in Florida; these services have continued in operation daily since first scheduled, and it is explained that they are designed to handle increased passenger traffic resulting from the concentration of military, naval, and war establishments in the south-east. In normal years the through passenger traffic between the North-Eastern States and Florida is well-nigh doubled during the winter season, and there are numerous long-distance winter resort trains in other directions, both to and from New York and Chicago.

Increased Use of Refrigerator Wagons

From September 1, 1943, an amended Order of the United States Office of Defense Transportation made it compulsory, instead of (as previously) permissive, for the railways to use refrigerator wagons, where available, instead of box wagons for certain classes of westbound freight. The position arises from the fact that the movement of fresh fruit and vegetables from Pacific Coast areas brings into the Eastern States large numbers of refrigerator wagons which normally return empty, while, on the other hand, the movement of war materials to the West Coast results in an accumulation of box wagons there for which no return eastward traffic is available. The refrigerator wagons have less internal space than the box wagons, and up to three of the former may be used in substitution for one of the latter. Hitherto it has been permissible to use only refrigerator wagons owned by the Pacific Fruit Express and the Atchison, Topeka & Santa Fe Railway in making such substitution, but it will be made in future without restriction. Two refrigerator wagons are to be used, if available, in substitution for one bogie box wagon up to 40 ft. 7 in. long, and three as substitutes for a box wagon from over 40 ft. 7 in. to 50 ft. 7 in. long, for transcontinental westbound full carload shipments into the States of California, Idaho, Arizona, Nevada, and Utah.

The Quebec Conference and the C.P.R.

Some information concerning the advance preparations and detailed arrangements made to accommodate the distinguished personnel and working staffs of the Quebec conference in the famous Canadian Pacific hotel, the Chateau Frontenac, have recently become available. Dr. E. H. Coleman, Canadian Under Secretary of State, was Chairman of what was known for convenience as the Canadian co-ordination committee of the conference, and as such was responsible for providing both living quarters and working facilities for the 650 to 700 persons either taking direct part or assisting in the conference. He held a similar position at the time of the Royal visit in the spring of 1939.

He was informed of the approaching conference a few days before July 30. On that date, he conferred with Mr. D. C. Coleman (his brother), the President & Chairman of the Canadian Pacific Railway Company, to seek his assistance in taking over the Chateau Frontenac to house the military and working personnel of the conference. Though he was empowered to do so, Dr. Coleman did not say why the Government wanted to commandeer the hotel, but it is obvious that the head of the C.P.R. realised that the Government would not have made such an extraordinary request unless some very important persons were expected.

The occupancy and advance reservations of the Chateau Frontenac indicated that normally the hotel would be used nearly to its capacity of about 1,100 beds in 624 rooms. Nevertheless, guests in the hotel and those who had booked reservations for what was to be the conference period had to be notified that they would be unable to use the accommodation. During the conference, there were between 500 and 600 persons quartered in the Chateau, including military chiefs of staff of three nations, and such well-known personages as Mr. Eden, the Foreign Secretary. The delegations of the United Kingdom and the United States each numbered between 200 and 250 persons, and there were some 85 Canadians in the hotel.

The bill for accommodation of these staffs and personalities in the Chateau, which the Canadian Government is paying as host to the conference, has been estimated by Dr. Coleman at approximately $8,000 a day. The rates for the delegations were about $11 to $12 a day on the American plan (including meals). In addition, $10 a day was paid for some 25 rooms used as offices.

As early as August 1, officers of the U.S. Signal Corps arrived in Quebec to select an entire floor at the hotel for the installation of telephone, teletype, and other communications installations. The Canadian Army Transport division was also on the scene early to take over the St. Louis garage for the numerous military cars used to transport those connected with the conference.

Two of the best chefs of the Chateau Frontenac, who had joined the Air Force not long before the conference, were recalled and assigned to duty in the hotel kitchens to ensure that the guests were well looked after at meal times.

Ministry of War Transport Accident Report

Scarborough, L.N.E.R.: August 10, 1943

Major G. R. S. Wilson inquired into the collision which occurred at 10.57 a.m. on August 10, 1943, at Scarborough, L.N.E.R., when the 9.5 a.m. express from Hull, consisting of 7 coaches drawn by 4-4-0 locomotive No. 2024, running 20 min. late, was signalled in error by the station box signalman, H. W. Scholes, into No. 5 platform line, when he had intended it should run to No. 3 line, and struck the coaches of the 11.18 a.m. ordinary passenger train to Hull, waiting for the engine to back on. The leading coach of the standing train had its headstock smashed; the solebars, of comparatively light section, were driven apart and 3 compartments were wrecked. The vehicle was fully loaded with a military detachment and 4 soldiers were killed. Eight had to be detained in hospital and 22 others were injured. There were no casualties in the express. Rescue work was promptly taken in hand, and the last injured person was rescued from the wreckage at about 12.35 p.m. The platform line was re-opened to traffic at 3.30 p.m. It was a fine clear day, with a dry rail. The layout of the lines and signals concerned appears in the accompanying diagram. The station signal box is concerned only with the working in lines 3 to 9 inclusive, which are not track circuited; the view of the outer platform ends is good.

Major Wilson found that the accident was due to the mistake made by Signalman Scholes, who accepted full responsibility for it and made no attempt to excuse himself. He was quite unable to account for it, however. He knew that the express, being late, would have to be received in No. 3 line and recorded that fact when the train was offered. He had previously dealt with a railcar and trailer from " C " road (see plan) to No. 9 platform, for which 33 points were reversed. When these vehicles were moved out to the departure line to leave the trailer there he restored points 8 but not points 33 to normal. Scholes was hand signalling the railcar back to No. 9 when the express was offered and he pulled f.p.l. levers 22, 9, and 34, locking 33 points reversed for No. 5 line. His recollection of pulling 37 signal was not clear, but he appears to have believed all the time that the route was set into No. 3 line. He knew No. 5 was occupied and it had been his practice always to place a collar on No. 37 lever after sending the empty coaches into that road about 9.45 a.m. daily. He could not explain his omission on this occasion, but thought his attention might have been momentarily diverted by conversation through the window with a shunter.

Driver Langfield said he approached the station cautiously and passed the box at about 5 m.p.h. when a shout from his fireman caused him to make a full brake application, but Major Wilson doubts if the speed was less than the usual 15 m.p.h. at the spot. Had it been as low as Langfield said the train should have stopped short of the standing vehicles. It would not, however, have been reasonable to expect either man to appreciate, while running between the overbridge and the signal gantry, that No. 5 line was occupied, although the leading coach was just visible over that distance.

The accident was due to the failure of a man with a consistently reliable record and could have been prevented by track circuiting. The present traffic conditions do not call for such assistance, given the excellent view from the box. The station and signalling are old fashioned and awkward to work in many respects. Reconstruction with colour-light signalling is contemplated, but if this has to be deferred the station should be included in any general extension of track circuiting undertaken after the war. A brake compartment at the leading end of the standing train would have made the collision less serious, but having regard to all the circumstances Major Wilson does not consider its absence a matter for criticism.

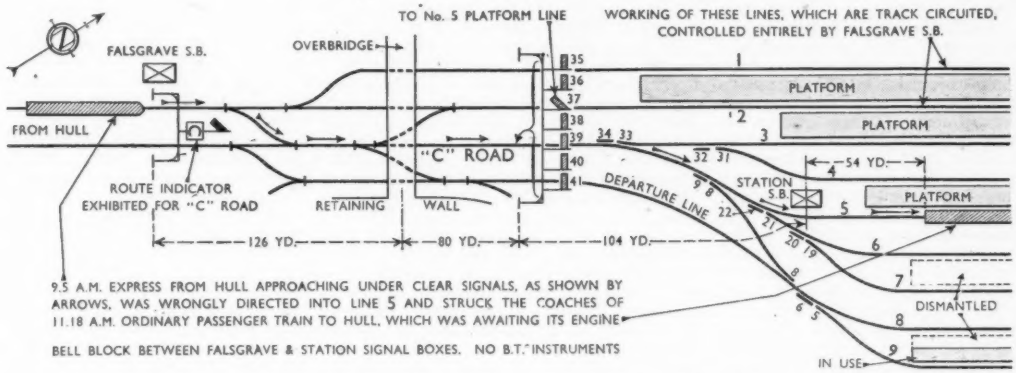

TO No. 5 PLATFORM LINE
WORKING OF THESE LINES, WHICH ARE TRACK CIRCUITED, CONTROLLED ENTIRELY BY FALSGRAVE S.B.
FALSGRAVE S.B.
OVERBRIDGE
FROM HULL
"C" ROAD
PLATFORM
PLATFORM
PLATFORM
STATION S.B.
DEPARTURE LINE
ROUTE INDICATOR EXHIBITED FOR "C" ROAD
RETAINING WALL
126 YD.
80 YD.
104 YD.
54 YD.
9.5 A.M. EXPRESS FROM HULL APPROACHING UNDER CLEAR SIGNALS, AS SHOWN BY ARROWS, WAS WRONGLY DIRECTED INTO LINE 5 AND STRUCK THE COACHES OF 11.18 A.M. ORDINARY PASSENGER TRAIN TO HULL, WHICH WAS AWAITING ITS ENGINE
BELL BLOCK BETWEEN FALSGRAVE & STATION SIGNAL BOXES. NO B.T. INSTRUMENTS
DISMANTLED
IN USE

Diagram illustrating circumstances of collision at Scarborough, L.N.E.R., on August 10, 1943

Reorganisation of South Manchuria Railway

The administration of the South Manchuria Railway recently completed a wholesale reorganisation by transferring its headquarters from Mukden to Hsinking. The combined general management of the South Manchuria Railway and Manchukuo State Railways at Mukden has been dissolved, but four important offices, namely, the general-secretariat, accountancy, equipment, and industry departments, in addition to several sections of the traffic office, remain there.

New offices established at Hsinking comprise the planning bureau, and the traffic bureau, formed as a result of the merging of the former offices of general affairs, transport, road traffic, and water transport. There is also a special section dealing with matters of defence.

The general control of the S.M.R., hitherto exercised by the Japanese Government, has been transferred to the Japanese authorities in Manchuria, that is to say, to the Japanese ambassador at Hsinking and to the Governor of Kwantung; but matters of importance are reserved for the Japanese Government.

Canteens on the Southern Railway

On the Southern Railway, mess-rooms which were provided before the war for the purposes of making tea and heating food are giving way rapidly to canteens, particularly at the larger depots and railway centres. At Lancing, for example, a building has been provided recently to seat 750 persons at one sitting, and the kitchen has been fitted with the latest equipment.

Among other canteens opened in the last twelve months are those at Stewarts Lane Feltham, Hither Green, Exmouth Junction, Slades Green, and Gillingham; and one provided for the quarrymen at Meldon Quarry fills a long-felt need, as the nearest town is four miles away.

Three mobile canteens have been presented to the railwaymen by men of the Argentine railways and are now in use at Guildford, Nine Elms Locomotive Running Depot, and Eastleigh Locomotive Depot, where, in due course, more permanent buildings will be provided. The mobile canteens then will be moved to other points as need arises. In addition, nine stand-by mobile canteens are always in readiness to be moved at a moment's notice to wherever they may be needed, in case of a *Blitz*. They are loaded with provisions, and a volunteer staff is " at the ready " to give every assistance.

The canteens are open to any railwayman who may be on duty, and the main meal costs usually 1s. or 1s. 1d., which includes a hot cooked meal and sweet

Parliamentary Notes

Government Policy for Post-War Transport

The Earl of Listowel in the House of Lords on October 27 asked the Government whether plans were being prepared for the post-war development and co-ordination of our national system of transport. He said there was widespread public anxiety to know whether the Government was preparing plans for the future of transport, and, if so, whether those plans were sufficiently advanced for a public statement to be made. In the last few months increasing interest had been shown outside Parliament in the post-war organisation of transport. The financial editor of *The Times* had pointed out that the failure of the railways to stand up to trade depression between the wars was largely due to the absence of any long-term investment policy which they could rely on being carried out by the Government. Only this month the railway companies had republished certain articles that appeared in *The Railway Gazette* under the title of "A National Transport Programme." Local authorities had shown recently that they were no less keenly interested than financial experts in the railway companies and business interests in what the Government might be doing, or possibly leaving undone, about the future of transport. He asked the Minister whether he had communicated any road projects to the Ministry of Town & Country Planning or to the Minister Without Portfolio, and, if so, what was the relation of his plans for road development and construction to the location of industry after the war. It was, in fact, impossible to work out any plans for post-war reconstruction in this country without, at any rate, a rough idea of how transport would be organised. The most obvious requirement of transport after the war was that it should continue to be an efficient servant of the public by the carriage of goods and passengers as speedily and as cheaply as possible. The first essential was the unification of all the branches of internal transport under a common authority which had a plan and which had made it possible to run them during the war as a single complementary and co-ordinated service.

Allocation of Traffic

The Ministry of War Transport had been able to allocate to road hauliers, to railway, canal, and coastwise shipping companies the type of traffic to which they were best suited and which they could carry at the lowest cost to the consumer. The London Passenger Transport Board did before the war, for underground and surface transport in the London area, what had now been done on a national scale for all the major branches of transport. The last Royal Commission on Transport which reported in 1931, agreed unanimously that without unification any attempts to bring about co-ordination would not be successful. Their view had been reiterated this month by the railway companies, who said, in the publication to which he had referred, that the problem was not any more a railway problem or a road, canal, docks or air problem, but a transport problem. Only if transport was looked at as a whole would a satisfactory solution be found.

The second essential of a satisfactory system of national transport, which again had been carried out during the war, was that it should be subject to a sufficient measure of public control and supervision.

The war had produced a temporary solution, of the problem by the placing of all transport under a Government Department presided over by Lord Leathers and harnessed to the war effort. But what the country needed now was a plan at any rate for a permanency. Had the Minister in mind any machinery for co-ordinating transport on a national scale after the war?

Lord Reith's Plan

Had he examined the advantages and disadvantages of a proposal put forward by an ex-Minister of Transport, Lord Reith, in a speech in that House on June 17, 1942? The exact words used by Lord Reith were: "I submit that there should be a national transport corporation covering railways, road transport, canals, coastwise shipping, and internal air services; that the railways should be brought under unified management and become part of the corporation." He was authorised by Lord Reith to say that he adhered without qualification to those views. In actual fact Lord Reith appointed two of the foremost traffic experts to inquire into and report upon the transport problem in Great Britain. They drafted the text of a National Transport Bill, including the complicated financial machinery for buying out existing owners.

He hoped that Lord Leathers had examined with special care the possibility of handing over the wartime responsibilities of his Department to a national transport board which would continue to keep the goods and passenger traffic of road, rail, air, and water properly co-ordinated in a single transport system. Of course the railways, roads, canals, inland airways and coastwise shipping would have their joint managerial boards at a regional as well as at a national level. The most important of these undertakings would continue to be the railways. The amalgamation of the four main-line railway companies and the London Passenger Transport Board under the Railway Executive Committee had already achieved striking improvements in efficiency and economy. The pooling of wagons, for instance, and the interchange of staff and locomotives were advantages of amalgamation. It was true, of course, that after the war the optimum sizes of the administrative unit for the day-to-day operation of railway traffic might be regional rather than national, but that did not mean that the various regional authorities would not have to be under a central railway authority or board which would implement a common railway policy in matters affecting freight and passenger rates, labour conditions, capital development, and so on. The question to be decided was whether control of the railways should be restored to a private monopoly, the public being protected to some extent by statutory price-fixing machinery, or whether control should not be vested in a public board responsible in the last resort to Parliament and not to shareholders.

An outstanding advantage of public control would be the linking of railway investment and price policy, and the financial policy pursued by the Government of the day. If the Chancellor of the Exchequer was anxious to maintain full employment by ironing out the ups and downs of the trade circle, increased expenditure on railway development could be used as a means of sustaining trade and preventing unemployment by being operated as soon as bad times were thought to be coming. It might also be possible, in addition to the execution of new works, to adjust freight rates so as to meet the onset of a trade depression. Those ideas were taken from the national transport programme prepared by the railways, although the railways were hesitant to recommend the machinery which would make them a practicable proposition.

Immediately after the war there would be immense and urgent need for capital expenditure both on renewals and replacements, and on fresh development, such as the further electrification in suburban areas. Could the Minister say anything yet about the attitude of the Government to the post-war financial policy of the railways? The present system of leasing the railways to the Government was obviously an emergency measure—to be continued for one year after the war—and after that the public would be faced by a straight and inevitable choice between nationalisation or national control by a public board or reversion to private ownership. He wished the issue of nationalisation could be lifted right out of the rut of Party policy. An issue of such magnitude should be decided on grounds of business efficiency and service to the public, and not by violent preconceptions about the merits of Socialism or private enterprise.

Rail and Road Relationships

Another problem that had to be faced immediately was the relationship between the railway companies and long distance road hauliers after the war. Had the Minister any scheme in mind to prevent that cut-throat competition between road and rail traffic after the war breaking out as soon as the war came to an end? What was most needed was machinery for establishing permanently the natural complementary relationship between roads and railways. Would the 25,000 long-distance vehicles now subject to the directions of the Ministry be handed back unconditionally to their owners, and the Government monopoly of traffic travelling over 60 miles suddenly come to an end? He asked the Minister to consider whether the functions of his Ministry in that respect could not be discharged by a transport board, which would continue to control and supervise long distance road haulage by the holders of "A" and "B" licences.

The transport board, whether national, regional or local, according to the circumstances of the case, would, by agreement with the railways, allocate to haulage firms the journeys less satisfactorily handled by rail, would enforce good conditions of employment on the roads, and would fix haulage rates at a reasonable level in relation to costs. That would still leave 80 per cent. of commercial road users, shops and other business firms holding a "C" licence, outside the scope of public control.

Lord Mottistone emphasised the importance of maintaining our shipping interests and not allowing anything to interfere with them.

Lord Brabazon of Tara said that we had hired the railways during the war at the arbitrary figure of £43,000,000 a year. The railways had made an enormous amount more than that, and he would like to know what was going to happen eventually. Were we going to hold on to the railways until their net receipts fell below £43,000,000, and then hand them back, or what was going to be the policy? It seemed to him like a very immoral piece of sharp practice to hire the railways at a rate determined by yourself, to hold on to them until their earnings fell below that rate, and then hand them back to the companies. Some pronouncement should be made as soon as possible as to what was going to be done in the matter. It had been said that it was the intention to amalgamate the railways into one, and he thought that, having run them as one

system during the war, this would probably be the best time of all to get them going as one concern. Amalgamation or whatever system they adopted for the railways was not going to put them in a very good position after the war unless they attacked some of those forces which were eating at their vitals, such as the long distance coach which had grown up into an industry of a very big size in this country. Certain legislation had been introduced about it, and it was not a very difficult problem for the reason that all long distance coaches in this country were held under two groups, and there was scarcely a company in England which was not half held by the railway companies. When they came to the hauliers they had a much more difficult problem to face. There were approximately 60,000 hauliers in this country, and the fact must be faced that they were eating into the earning power of the railways.

Competition and Public

Competition was a very wise and healthy thing in many walks of life, but he very much doubted whether it was a healthy thing in transport. It must be run as one entity, the various parts being complementary one to another. It was impossible to look to the future and think that they were going to allow all the different forms of transport to run as separate entities competing against each other, because in the end the public would not benefit.

Lord Essendon said it would be a bad day for Great Britain if the coastwise shipping industry fell upon bad times. He was aware that coastwise shipping and the railway companies some time ago established between themselves a commercial understanding, but it was highly important that those agreements should be broadened and extended to include all forms of inland transport. The salvation of the future of the coasting trade lay in due provision and arrangements being made between the parties concerned—road, rail, coastwise shipping, and canals alike—for a sensible and effective scheme of co-ordination between those forms of transport, all working together instead of in separate compartments, and all working together also for the benefit of the community at large. The first requirement for the co-ordination of internal transport was to put it on an economic basis, so that each form of transport would stand on its own feet and cover its own reasonable economic needs.

Lord Sempill said that to make proper use of all the facilities for civil air transport in these islands at the end of the war, it was essential that arrangements should come under the control of a civil Ministry, and he suggested the formation of a Ministry of Air Transport. He pointed out that freight by road averaged twenty times the speed of freight by rail, and said that that was one of several explanations of the astonishing demand after the last war for road vehicles in a country where railways, canals, and coastal ships were available. The railway favoured bulk loads of some hundreds of tons per train, as only in such bulk was rail carriage remunerative, whereas the motor vehicle loads ranged from 5 cwt. to 10 tons, or not much more. The modernising of our road transport mechanism required that a framework of motorways should be built so interlocked with our existing network that this traffic would willingly take itself out of the byways where it collected its loads and prosecute the remainder of its through journey on motorways.

Lord Sandhurst wanted an assurance from the Government that there was no intention to do anything that would destroy private enterprise in transport.

The Earl of Cork & Orrery submitted that if there was to be Government control over the transport problems of this country, shipping of all sorts must be included, not with a view to stifling private enterprise, but to help it where necessary.

The Minister's Reply

Lord Leathers (Minister of War Transport), replying to the debate, said that after the war we would, as never before, be dependent on export trade not only for our prosperity, but for our survival. Therefore, he had in the forefront of his mind the need to give every opportunity for trade, and particularly for the export trade, by providing a really cheap and efficient service. By "cheap" he meant a transport system so co-ordinated and run that it could provide, and did provide, the best possible service for the least real cost to the community as a whole. Whatever the merits of competition in stimulating enterprise and efficiency, it must be evident that if it was carried so far as to undermine the stability of services essential to the community and to the commercial interests its effect would ultimately prove damaging to the national interests.

The war had made it clearer than ever before that the railways were a national asset which must be retained in full efficiency. That was absolutely necessary, not only for trade and industrial purposes, but for defence. From that it followed that the financial position of the railways must be firmly established. They could not allow so vital a service to be starved of proper maintenance and improvements because of shortage of funds or the inability to raise new capital. That could be met by placing the credit of the Government behind the railways, by nationalisation, and the same end could also be achieved by creating conditions under which the railway companies could operate on a reasonable profit margin. In deciding on their course, the Government would be influenced solely by practical considerations and they would seek to obtain the best results with the minimum of dislocation. He did not believe that the "square deal" proposals put forward by the railway companies before the war by themselves would solve the problem. Those proposals failed to reach the root of the problem, and he was firmly convinced that some more radical solution had still to be found, although he was not yet able to bring forward any precise suggestion.

As to the railway agreement, he said that the Government had no intention of continuing to take the profits from the railways just for the sake of doing so for a period completely undetermined. He was quite sure that when the notice to terminate was finally given it would be dictated either by the circumstances of the time or by any new circumstances which might shape their course for the future.

He could assure the Earl of Listowel that they were looking favourably on the suggestion made by the planners of the London County Council that there should be set up an investigating body to examine and report upon the railway layout involved in the County of London plans. The one point that stood out was rather the composition of that body, and in that way he did not think that they would be able to conform to what was suggested by the planners.

On the physical side of road construction and maintenance, he had placed definite proposals before his colleagues. They would have to be carefully dovetailed into plans for the location of industry and for town and country planning generally. His proposals took account also of road safety and amenity as well as traffic needs.

He was much encouraged by the progress which was now being made towards the amalgamation of the main associations of road hauliers, and he was hopeful that the lessons of co-operation and organisation which the war had imposed would not be lost. The existence of so many separate and small units in the road haulage industry vastly increased the difficulties of bringing about any permanent co-ordination between it and other forms of transport. That was a factor of which full account must be taken.

They must be careful in planning the co-ordination of road and rail to see that nothing was done to impede coastal shipping from fulfilling its full function. He added that co-ordination, and possible amalgamation, of the Channel packet services was being examined by the railway companies, and certain of the coasting liner interests were pursuing schemes of consolidation which he hoped might lead to improved service to traders and a reduction in costs of operation.

The place of the canal system in their future transport system was less easy to determine. In some of the canals they had assets which they must use to the limit of their economic capacity, but it might prove desirable to abandon certain other waterways originally provided to serve industries which had either declined or moved elsewhere. Docks and harbours were a very important link in our transport chain. The course of the war had seriously disturbed the balance of our ports, so that many had experienced serious loss of trade and consequent financial embarrassment. They must see to it that the ports, whether for foreign or coastal trade, were restored to a sound condition and well equipped. Discussions were proceeding between the railway companies and the Dock & Harbour Authorities Association aimed at securing greater co-ordination between all dock and harbour undertakings. The railway companies were now in process of becoming members of the Association, and that was a most welcome development.

Air Services

Our island was so small and the train services between the main centres of population were, in peacetime, so good that the scope for internal air services was necessarily limited. But there would be a number of services, many of them including a short passage over the sea, for which the air was eminently suitable.

The problems of post-war co-ordination of transport were far from simple, and they would not be solved on doctrinaire lines. Exploratory discussions were proceeding with leaders of the various branches of transport, and before he propounded major proposals to the House he intended to satisfy himself that they were fair, workable and well calculated to achieve the object in view. They would not be daunted by the complexity of the issues or by the magnitude of the interests involved. Just as soon as he was satisfied that all the relevant facts, including the views expressed in the House that day, had been properly considered, there would be no timidity or hesitation in taking decisions.

The Earl of Listowel said they had got certain crumbs of real encouragement, but he did not feel that any preparations were being made for the co-ordinated system of national transport which everyone desired. Nothing was being done to prevent a further extension of private monopoly after the war for essential public service. He did not feel that the issue of private monopoly *versus* public control was being fairly and squarely faced.

Notes and News

Pinchin, Johnson & Co. Ltd.—An interim dividend of 2½ per cent., less tax, has been declared, the same as a year ago.

L.P.T.B. (Valuation for Rating) Order.—The Minister of War Transport on October 19 made the London Passenger Transport Board (Valuation for Rating) Order, 1943 (S.R. & O., 1943, No. 1492).

South Manchuria Railway to Reclaim Land.—According to the official German news-agency, the South Manchuria Railway has decided to reclaim 12,500 acres of land in the delta of the River Taiuang for the cultivation of rice.

Manchester Liners and Air Powers.—A resolution was passed at a meeting of Manchester Liners Limited on October 20 in favour of obtaining the necessary powers to enable the company to own and operate air and seaplanes and aerodromes.

Bengal-Nagpur Railway Co. Ltd.—The directors have declared a second interim dividend for the year to March 31, 1943, from surplus profits of ¼ per cent., making with the guaranteed interest of 1¾ per cent. a distribution of 2 per cent. actual, less tax (same).

Canadian National Railways.—Gross earnings for September, 1943, were $36,946,000, an increase of $3,086,000 in comparison with September, 1942, and the operating expenses advanced from $25,028,000 to $27,521,000, leaving net earnings $593,000 higher, at $9,425,000, Aggregate gross earnings from January 1 to September 30, 1943, amounted to $326,949,000, an advance of $56,122,000 in comparison with the first nine months of 1942, and the aggregate net earnings of $72,118,000 showed an improvement of $9,357,000.

Ottoman Railway Holding Co. Ltd.—Three half-yearly payments on the company's holding of £707,950 Turkish 7½ per cent. bonds, or £79,644 gross, were received during the year ended June 30, 1943, consisting of payments due June 1, 1942, December 1, 1942, and June 1, 1943. Income from other investments was £5,212 (£3,093), and the amount recovered or recoverable in respect of income tax was £1,926 (£2,082). After providing for management expenses, taxation, and interest on advances, the net profit is £35,937 (£26,367). Deducting £21,173 for interest at 3 per cent., less tax, on the outstanding "A" and "B" stocks, there is £14,764 (£6,380) available for redemption of the income debenture stocks. Since the date of the accounts the company has been able to redeem £38,348 "B" income debenture stock, after meeting the full 3 per cent. on both the "A" and "B" stocks.

Chemin de fer Bière-Apples-Morges.—This Swiss company showed improved financial results for 1942 compared with those attained the year before. Working receipts amounted to 401,700 Swiss francs (against fr. 362,000 in 1941), of which passenger receipts accounted for fr. 218,500 (fr. 197,600), the highest figure ever recorded. Working expenditure rose from fr. 346,500 to fr. 361,700, and the working surplus amounted to fr. 39,922, the highest ever attained, compared with fr. 15,453 a year previously. After providing for all charges, including the deficit incurred in respect of the company's road services, the profit and loss account closed with a credit balance of fr. 7,922, which was used to reduce the debit balance brought in from the preceding year (fr. 140,498) to fr. 132,575. The company owns and operates the narrow-gauge lines Morges-Apples-Bière (23 miles) and Apples-L'Isle-Mont la Ville (13 miles). Apples is about 14 miles from Morges, which is on the Lake of Geneva, and on the Lausanne-Geneva main line, 8 miles from Lausanne. The electrification of the system was completed recently.

C.I.T. Loss for 1942.—Compagnia Italiana Turismo, the Italian official travel and tourist organisation, in which the State holds an interest, sustained a loss of 1,379,731 lire in 1942, as compared with one of 2,219,447 lire in 1941.

District Locomotive Superintendents Required.—Two district locomotive superintendents, of age 30 to 35 years, are required by the Sudan Railways. Details are given in our Official Notices, page 471.

British Electric Traction Co. Ltd.—The directors have declared the following interim dividends on account of the financial year ending March 31, 1944, payable on December 11, 1943, to stockholders registered in the books of the company on November 11, 1943:—6 per cent. cumulative participating preference stock—3 per cent. actual (the same), less income tax at the rate of 10s. in the £; 8 per cent. non-cumulative preferred ordinary stock—4 per cent. actual (the same), less income tax at the rate of 10s. in the £; deferred ordinary stock—15 per cent. actual (the same), less income tax at the rate of 10s. in the £.

Permanent Way Fatality.—Lord Stevenson in the Court of Session on October 21 gave judgment for the London & North Eastern Railway Company in a claim brought by Mrs. Redpath for payment of £2,000 as damages for the death of her husband from injuries received while in the company's employment. Mr. Redpath was engaged on repairs on the down track of the main Edinburgh-Aberdeen line, when he was struck by a regular express passing on the up line. Lord Stevenson was satisfied that Mr. Redpath received warning of the approach of the train, and that it was his (Mr. Redpath's) failure to look for oncoming trains which, in his Lordship's opinion, caused the accident.

United Steel Companies Limited.—The report for the year ended June 30, 1943, states that the works and mines have been well employed throughout the year. The profit, after making provision for deferred repairs, depreciation, and E.P.T., was £2,204,459 (£2,096,723). Transfers are made of £125,000 (same) to central reserve for obsolescence, of £1,290,000 (£1,154,000) to reserve for income tax, of £152,000 (same) to staff pension, etc., schemes. After deducting these items and allowing for directors' fees, and for debenture interest and redemption, there is an available profit of £408,506 (£435,979), and the balance brought forward was £477,156. The final dividend is 5½ per cent., less tax, again making 8 per cent., less tax, for the year, and the carry forward is £499,662.

County of London Plan Exhibition.—On November 3, Sir Giles Gilbert Scott, R.A., opened at the Royal Academy, Burlington House, Piccadilly, W.1, the County of London Plan Exhibition (which was held at County Hall last July and August). It will be open to the public at Burlington House from 10 a.m. to 5 p.m. on weekdays, and from 2 p.m. to 5 p.m. on Sundays, until November 28; admission is free. Afternoon talks will be given as follows (at 3 p.m. in each case): Sir Charles Bressey, C.B. (November 5); and Messrs. H. Alker Tripp, C.B.E., Assistant Commissioner (Traffic) of Police for the Metropolis (November 10); W. R. Davidge, F.R.I.B.A. F.S.I., A.M.Inst.C.E., town-planning consultant (November 15); W. H. Ansell, M.C., immediate past-President, Royal Institute of British Architects (November 17); and L. St. G. Wilkinson, M.C., M.Sc., M.Inst.C.E., Borough Engineer & Surveyor, Wallasey, and President, Institution of Municipal & County Engineers (November 25).

G.W.R. (Extension of Time) Order.—The Minister of War Transport has made the Great Western Railway (Extension of Time) Order, 1943 (S.R. & O. 1943, No. 1447) extending by three years the

British and Irish Railway Stocks and Shares

Stocks	Highest 1942	Lowest 1942	Prices Oct. 29, 1943	Prices Rise/Fall
G.W.R.				
Cons. Ord.	58	39	61½	+ 1½
5% Con. Pref. ...	115½	105½	112½	+ 1
5% Red. Pref. (1950)	109½	103½	107	—
5% Rt. Charge ...	133½	123½	127½	+ 1
5% Cons. Guar. ...	130½	121½	124½	—
4% Deb.	117	105	113	+ 1
4½% Deb.	118	108	113½	+ 1
4½% Deb.	125	113	117½	—
5% Deb.	137	127	128	—
2½% Deb.	77	70	74½	—
L.M.S.R.				
Ord.	28½	16⅜	33½	+ 1½
4% Pref. (1923) ...	63½	50½	61½	+ 1
4% Pref.	76½	67½	73	+ ½
5% Red. Pref. (1955)	103½	94½	103½	—
4% Guar.	104½	97½	100	—
4% Deb.	108½	101½	106	—
5% Red. Deb. (1952)	111	107½	109½§	—
L.N.E.R.				
5% Pref. Ord. ...	9⅜	2⅞	10½	+ ½
Def. Ord.	5	1⅜	5	+ ⅛
4% First Pref. ...	62	49½	61	+ 1
4% Second Pref. ...	32½	18½	34	+ 1½
5% Red. Pref. (1955)	95½	79	93½	—
4% First Guar. ...	98	88	96	—
4% Second Guar. ...	90	78	85	—
3% Deb.	85	76	83	—
4% Deb.	106⅜	100½	105	—
5% Red. Deb. (1947)	106	103	103	—
4½% Sinking Fund Red. Deb. ...	106	102½	105½	—
SOUTHERN				
Pref. Ord.	77	61½	77	+ ½
Def. Ord.	23½	14⅛	25½	+ 1
5% Pref.	112⅜	104	112½	+ 1
5% Red. Pref. (1964)	110⅜	105½	111½	—
5% Guar. Pref. ...	131	121½	123½	—
5% Red. Guar. Pref. (1957)	115½	109½	11-½	+ 1
4% Deb.	116	104½	111	+ 1
5% Deb.	134	125½	123	—
4% Red Deb. (1962–67)	110¾	106	107½	—
4% Red. Deb. (1970–80)	111	106½	108½	—
FORTH BRIDGE				
4% Deb.	109⅞	108	106	—
4% Guar.	105½	100	10-½	—
L.P.T.B.				
4½% "A"	122½	111	116½	+ 1
5% "A"	131½	122	12>½	—
3% Guar. (1967–72)	95⅜	97½	98	—
5% "B"	121	111½	116½	—
"C"	56½	38	69	—
MERSEY				
Ord.	27½	20½	32	—
3% Perp. Pref. ...	61½	56½	65	—
4% Perp. Deb. ...	102½	99½	103	—
3% Perp. Deb. ...	80½	76	79	—
IRELAND				
BELFAST & C.D.				
Ord.	9	4	6½	+ ½
G. NORTHERN				
Ord.	29½	12½	24½	+ 4½
Pref.	—	—	44	+ 3½
Guar.	—	—	63½	+ 5½
Deb.	—	—	82½	+ 6½
G. SOUTHERN				
Ord.	25	10	23½	+ 8½
Pref.	29	12½	30	+ 6½
Guar.	53	35½	56½	+ 10½
Deb.	71½	55½	84½	+ 12½

§ ex-dividend

OFFICIAL NOTICES

Situations Vacant

SUDAN RAILWAYS require the services of TWO DISTRICT LOCOMOTIVE SUPERINTENDENTS, age 30-35 years. Candidates must be fully qualified Locomotive Engineers both in theory and in practice. Must have graduated in Mechanical Engineering from a University and/or must be a Corporate Member of the Institution of Civil Engineers or of the Institution of Mechanical Engineers, must have served an apprenticeship or pupilage of not less than four years on a railway or with a firm of locomotive builders of repute and must have filled a position of responsibility in Locomotive Engineering for not less than one year.

TERMS:

Either—

(1) Starting rate of pay £E.480—540 per annum (£E.1 = £1 0s. 6d.) according to age, qualifications and experience, with periodical increases of pay in accordance with Government Scales, viz., £E.480—540—600—660—720—780—852—936, all increases being biennial with the exception of the last one which is triennial. Selected candidates will be appointed on Probationary Contracts for two years and subscribe to the Provident Fund, after which if accepted to serve towards pension their contributions will be transferred to the Pension Fund.

or—

(2) Short term contract for two years, which may be extended for further periods. Pay £E.640—720 per annum, according to age, qualifications and experience. A bonus of one month's pay for each completed year of service will be given at the termination of the contract.

Free passage on appointment. Strict medical examination. At present there is no income tax in the Sudan.

Applicants should write to the Ministry of Labour and National Service, Central (Technical and Scientific) Register, Alexandra House, Kingsway, London, W.C.2, for the necessary application forms. The reference number C.1680 must be quoted.

OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Monday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

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time limited by Section 43 of the Great Western Railway Act, 1937, as extended by the Great Western Railway (Extension of Time) Order, 1940, for the compulsory acquisition of lands in connection with the construction of Railway No. 1 (Denham & Ruislip), and Railway No. 2 (Dawlish & Exminster), authorised by Section 5 of the Act of 1937.

Reclamation of Worn Parts.—At an extra general meeting of the Institution of Mechanical Engineers on November 12, at 5.30 p.m., a symposium of papers on the reclamation of worn parts will be given.

Electrification of the Wirral Lines of the L.M.S.R.—On November 9, at 5 p.m., Mr. C. E. Fairburn, M.A., M.Inst.C.E., Acting Chief Mechanical Engineer & Electrical Engineer, L.M.S.R., will read a paper on "The Electrification of the Wirral Lines of the L.M.S.R.," before the Railway Engineering Division of the Institution of Civil Engineers.

Welding Applied to Trackwork on the L.M.S.R.—A meeting of the Institute of Welding will take place at the Institution of Mechanical Engineers, Storey's Gate, Westminster, S.W.1, on November 10, at 4 p.m., when a paper will be read by Mr. N. W. Swinnerton and Dr. H. O'Neill on "Welding Applied to Trackwork on the L.M.S.R." Attention is drawn to the changes in the time and place of the meeting from those previously announced.

New L.M.S.R. Salvage Film.—On October 29 a L.M.S.R. mobile film-unit, built in an old railway coach, began a six-months' tour of that company's system. A film ("Fight Waste to Win") will be shown to L.M.S.R. employees at 77 important centres on that railway between London, Bristol, and Inverness. Its lesson is economy in fuel, paper, office stores, and machinery, and the commentator is Mr. Frank Phillips, the B.B.C. announcer. A preview was given on October 28 to directors and chief officers of the company.

Model Railway in U.S. Ordnance Exhibit.—An "Ordnance for Victory" show in Philadelphia recently was designed to let the public see the first class weapons and equipment American industry is producing for the armed services. The American Car & Foundry Company display centering on a model railway loaned by the Chesapeake & Ohio System stressed the tremendous job the railways are doing in the movement of raw materials and finished products to their destinations in record time. Colonel D. N. Hauseman, Philadelphia Ordnance District Chief, wrote to Mr. Charles J. Hardy, President of the American Car & Foundry Company: "If any one exhibit can be called the highlight of the show it would be the model railway you installed. It is our outstanding attraction to young and old alike and has certainly contributed materially to the success of 'Ordnance for Victory.'"

Agreed Charges.—Applications have been made to the Railway Rates Tribunal for the approval of 75 further agreed charges under the provisions of Section 37 of the Road & Rail Traffic Act, 1933. Notices of objection must be filed on or before November 9 with the Registrar, at Wellington House, 125-130, Strand, London.

Manpower and the Transport Industry.—In reply to questions by members of the Institute of Transport, whom he addressed at Derby on October 29, as to whether he would ask the Minister of Labour & National Service to refrain from taking further personnel from the transport industry, Mr. P. J. Noel-Baker, Joint Parliamentary Secretary, Ministry of War Transport, said that his Ministry was well aware of the difficulty which might arise this winter through shortage of labour, great efforts to deal with which were being made. It was desired, not only to maintain reserves, but to improve services for workers and shoppers wherever possible. What could be done would depend on the general balance of resources required for the war effort. Concerning the future of the industry, Mr. Noel-Baker contended that internecine competition between road, rail, and water must be ended; there would have to be some kind of new national rate-structure, and all forms of transport must have their proper places, brought up to date by the application of the results of scientific research. Room must be left for great developments, but it should be realised that considerable capital expenditure would be required. He would not be surprised if a channel tunnel came into existence.

Road Accidents in September, 1943.—The return issued by the Ministry of War Transport of the number of persons reported to have died, or to have been injured, as a result of road accidents in Great Britain during the month of September last shows 455 deaths (compared with 553 in September, 1942), 2,592 seriously injured (compared with 3,186 in September, 1942), and 7,418 slightly injured (compared with 8,694 in September, 1942).

The Position of London in Air Transport.—Speaking recently at a luncheon of the Paviors' Company in London, Lord Sempill said that, geographically, London was the centre of the world. In the future, when air transport would be so important, London's leadership would be related not only to finance and commerce, but to the physical world of air transport as a force for good and the development of civilisation. Lord Brabazon said he sincerely hoped that, when this struggle had come to a successful end, we should look on flying as something which would link the world, rather than as a method of destruction.

A model railway display at an "Ordnance for Victory" show in Philadelphia to stress the tremendous job the railways are doing in wartime (see accompanying paragraph)

Railway Stock Market

Despite satisfaction with the outcome of the Three-Power Conference at Moscow and the encouraging trend of the war news, most sections of the stock and share markets have remained inactive. There was, however, a better tendency in British Funds, and home railway stocks provided a strong exception to the prevailing market trend. Although best prices recorded in the latter in the past few days were not fully maintained, stocks of the main-line companies have shown widespread improvement on balance. Sentiment remained under the influence of the recent statement of Lord Leathers, Minister of War Transport.

The easier and inactive tendency in industrial and most other equity securities is generally attributed to the growing belief that, having regard to conflicting assumptions and opinions as to the post-war period, it is difficult to form any very definite views of the long-term outlook. Reference has been made in these notes on numerous occasions to the probability that the position and outlook of home railway stocks as to dividend payments appears easier to assess than that of many other leading industries. Probably because of the fact that many times in the past the reasonable hopes of stockholders have been disappointed, the market has not given sufficient emphasis to the favourable points in the position and outlook of the main-line railways. As events have turned out, the financial agreement has proved of much greater benefit to the Government than to railway stockholders. Nevertheless, the latter are virtually assured of dividends at around current rates until at least one year after the war. Lord Leathers' recent remarks were naturally couched in general and guarded terms. Nevertheless, they emphasised the importance of the railways, and his statement that "we cannot allow such a vital service" to be starved of proper maintenance and improvements due to shortage of funds or inability to raise new capital" tended to increase the belief that the railways and their stockholders will not be treated unfairly in any post-war plans for transport organisation and development. Indeed, the assumption is that stockholders should at least fare no worse after the war than under the existing financial agreement. A point which Lord Leathers did not mention was the moderate return stockholders are receiving under the latter arrangement. On the other hand, generous yields are shown on railway stocks.

The large yields provide an illustration of the pessimistic assumptions which have been current in the market as to the post-war outlook; but these views have been largely dispelled by Lord Leathers' statement, and this has found reflection in the widespread improvement in home railway stocks. Despite the latter, yields are still substantial; that on Great Western is 7¼ per cent., that on L.M.S.R. over 7⅜ per cent.; L.N.E.R. second preference returns 7½ per cent., and Southern deferred 6¾ per cent. The yield on Southern deferred is below that on the above-mentioned stocks, largely because, as it is the lowest priced stock in the dividend list, it tends to attract increasing attention as a means of participating in the trend of home rails.

Compared with a week ago, Great Western ordinary has risen from 59¾ to 62 at the time of writing. Great Western 4 per cent. debentures maintained their recent improvement to 112½, while the 5 per cent. preference gained a point to 113, and the guaranteed stock was again 124½. L.M.S.R. ordinary rose from 32 to 33⅜, the 1923 preference from 60½ to 62¾, and the senior preference from 74¼ to 75¾. L.N.E.R. second preference rose from 32½ to 35, and the first preference from 60 to 62¼. Moreover, L.N.E.R. second guaranteed improved from 88 to 88½. Southern deferred was 25⅝, compared with 24⅛ a week ago, and the preferred 78⅛, compared with 76¾. Southern 4 per cent. debentures were fractionally better at 110½; the 5 per cent. preference gained a point to 112½. Exceptionally, London Transport "C" has eased from 69 to 68¾ at the time of writing.

Argentine railway stocks, after remaining depressed under the influence of political uncertainties in Argentina, tended to rally. In some cases small gains were shown on balance. B.A. Gt. Southern 5 per cent. preference, for instance, improved to 28½, compared with 27½ a week ago, and this railway's 4 per cent. debentures were fractionally better at 63½. Elsewhere, Antofagasta preference was 47. San Paulo ordinary lost a point at 61, but United of Havana and Leopoldina debentures were lower at 34½ and 57 respectively. Canadian Pacifics at 16 were unchanged on balance.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ending	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1941/2	No. of Weeks	Aggregate traffics to date: Totals 1942/3	Aggregate traffics to date: Totals 1941/2	Aggregate traffics to date: Increase or decrease	Shares or stock	Prices: Highest 1942	Prices: Lowest 1942	Prices: Oct. 29 1943	Yield % (See Notes)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	24.10.43	30,620	+ 6,190	42	1,209,900	911,670	+ 298,230	Ord. Stk.	14	7⅞	14	Nil
	Argentine North Eastern ...	753	23.10.43	13,056	– 1,170	17	231,972	229,500	+ 2,472	,,	6½	3	7	Nil
	Bolivar	174	Sep., 1943	5,756	+ 238	40	47,669	40,709	+ 6,960	6 p.c. Deb.	19⅜	10	21½	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	20⅜	9	21	Nil
	Buenos Ayres & Pacific ...	2,807	23.10.43	107,100	+ 20,400	17	1,475,400	1,442,040	+ 33,360	Ord. Stk.	7⅛	4	7⅛	Nil
	Buenos Ayres Great Southern	5,080	23.10.43	164,940	+ 1,980	17	2,423,640	2,215,200	+ 208,440	Ord. Stk.	12½	7¼	15	Nil
	Buenos Ayres Western ...	1,930	23.10.43	57,780	+ 4,550	17	826,380	827,820	– 1,440	,,	12½	6	13	Nil
	Central Argentine	3,700	23.10.43	149,079	+ 25,419	17	2,195,652	2,054,817	+ 140,835	,,	9½	4½	9	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	3¾	2¼	4	Nil
	Cent. Uruguay of M. Video	972	23.10.43	33,010	+ 8,819	17	501,121	351,932	+ 149,189	Ord. Stk.	8	4	6¾	Nil
	Costa Rica	262	Sep., 1943	23,127	+ 11,571	13	72,034	38,244	+ 33,790	Stk.	16½	11	15	Nil
	Dorada	70	Sep., 1943	24,660	+ 5,360	39	196,807	137,705	+ 59,102	1 Mt. Db.	90½	89	95½	6.30
	Entre Rios	808	23.10.43	19,032	– 72	17	329,160	307,572	+ 21,588	Ord. Stk.	33	4½	7	Nil
	Great Western of Brazil ...	1,030	23.10.43	23,100	+ 5,900	42	677,400	453,600	+ 223,830	Ord. Sh.	9/-	9/-	32/6	Nil
	International of Cl. Amer. ...	794	Aug., 1943	$540,396	+ $242,201	32	$5,025,556	$4,308,750	+ $716,806	—	—	—	—	—
	Interoceanic of M xico ...	—	—	—	—	—	—	—	—	1st Pref.	1½	5/3	2	Nil
	La Guaira & Caracas... ...	22¾	Sep., 1943	8,035	– 555	39	76,460	63,355	+ 13,105	5 p.c. Deb.	11½	5	86½	Nil
	Leopoldina	1,918	23.10.43	38,870	+ 7,424	42	1,460,350	1,291,650	+ 168,700	Ord. Stk.	6¾	3½	6¼	Nil
	Mexican	483	21.10.43	ps. 325,200	+ ps.66,100	16	ps.6,416,870	ps. 4,575,900	+ ps. 1,840,900	Ord. Stk.	1	⅛	1½	Nil
	Midland Uruguay	319	Aug., 1943	14,706	+ 4,213	41	31,160	23,107	+ 8,053	—	—	—	—	—
	Nitrate	382	15.10.43	6,689	– 4,087	41	121,639	150,871	– 29,232	Ord. Sh.	77/	3½	77/6	Nil
	Paraguay Central	274	22.10.43	$5,625,000	+ $2,186,000	16	$90,048,000	$62,307,000	+ $27,741,000	Pr. Li. Stk.	53	40	70	8.7
	Peruvian Corporation ...	1,059	Sep., 1943	107,267	+ 21,631	13	314,208	251,242	+ 8,053	Pref.	19⅞	5½	14	Nil
	Salvador	100	Aug., 1943	c 91,000	+ c 42,000	9	c199,000	c 148,000	+ c 71,000	—	—	—	—	—
	San Paulo	153¼	17.10.43	52,048	+ 8,717	41	1,814,305	1,543,582	+ 270,783	Ord. Stk.	59	41	61½	3¼
	Taltal	160	Sep., 1943	7,175	+ 2,240	13	16,905	16,660	+ 245	Ord. Sh.	41/-	23/-	28/9	Nil
	United of Havana	1,301	23.10.43	48,595	+ 7,141	17	803,249	669,924	+ 133,325	Ord. Stk.	8½	2½	5½	Nil
	Uruguay Northern	73	Aug. 1943	1,411	+ 395	9	2,838	2,198	+ 640	—	—	—	—	—
Canada	Canadian Pacific	17,034	21.10.43	1,176 200	+ 158,600	42	46,780,600	40,472,000	+ 6,308,600	Ord. Stk.	16¾	9⅞	16	Nil
India†	Barsi Light	202	Aug., 1943	15,285	+ 2,003	22	107,055	76,587	+ 30,468	—	—	—	—	—
	Bengal-Nagpur	3,267	July, 1943	955,725	+ 17,325	17	4,184,625	3,553,425	+ 631,200	Ord. Stk.	102½	88	102½	3.85
	Madras & Southern Mahratta	2,939	10.8.43	256,725	– 5,949	19	3,588,488	3,028,997	+ 559,491	,,	105½	87	107½	6.35
	South Indian	2,349	31.7.43	214,758	+ 14,571	17	2,434,301	2,255,090	+ 179,211	,,	103¾	88½	103½	4.11
Various	Egyptian Delta	—	10.9.43	13,189	+ 766	24	229,115	176,202	+ 52,913	Prf. Sh.	5½	1⅜	2½	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	44	35	40	8.4
	Midland of W. Australia ...	277	Aug., 1943	36,199	+ 7,460	9	70,424	56,608	+ 13,816	Inc. Deb.	95	90	100	6
	Nigerian	1,900	31.7.43	63,520	+ 7,084	17	1,130,531	980,707	+ 149,824	—	—	—	—	—
	South Africa	13,291	4.9.43	842,927	+ 41,649	22	19,084,646	17,229,868	+ 1,784,778	—	—	—	—	—
	Victoria	4,774	Mar., 1943	1,595,068	+ 255,764	—	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ☆

† Receipts are calculated @ 1s. 6d. to the rupee

Argentine traffics are given in sterling calculated @ 16⅜ pesos to the £

§ ex dividend